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FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

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SHOW ISSUE

BUILDING BLOCKS

MUNICIPAL WORK PROVIDES CALIFORNIA CONTRACTOR AN UNEXPECTED PATH TO PROFITABILITY **PAGE 32**

MONEY MACHINES

Camera system boosts productivity and sells jobs

TOUGH JOB

Lining system solves grease problems in Vegas casino

MONEY MANAGER

Buying decisions: new versus used

MAKE LOCATING SIMPLER



A

On-Screen Arrows—

Arrows point you in the right direction.



B

Null Point Icon—

All arrows point toward each other indicating the null point and the pipe location.



C

Line Direction Compass—

Outer arrows tell which way to rotate the locator until it's in line with the lay of the pipe.



D

Camera Icon—

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Head Options	Puller Descaler or Standard Descaler

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By Marian Bond



ON THE COVER:

Express Sewer & Drain Owner Bill Heinselman with his wife, Sang Heinselman, at their facility in Rancho Cordova, Calif. The company began with a focus on residential work in 2007, but municipal opportunities quickly shifted the focus and made a big impact on the bottom line. (Photo by Lezlie Sterling)



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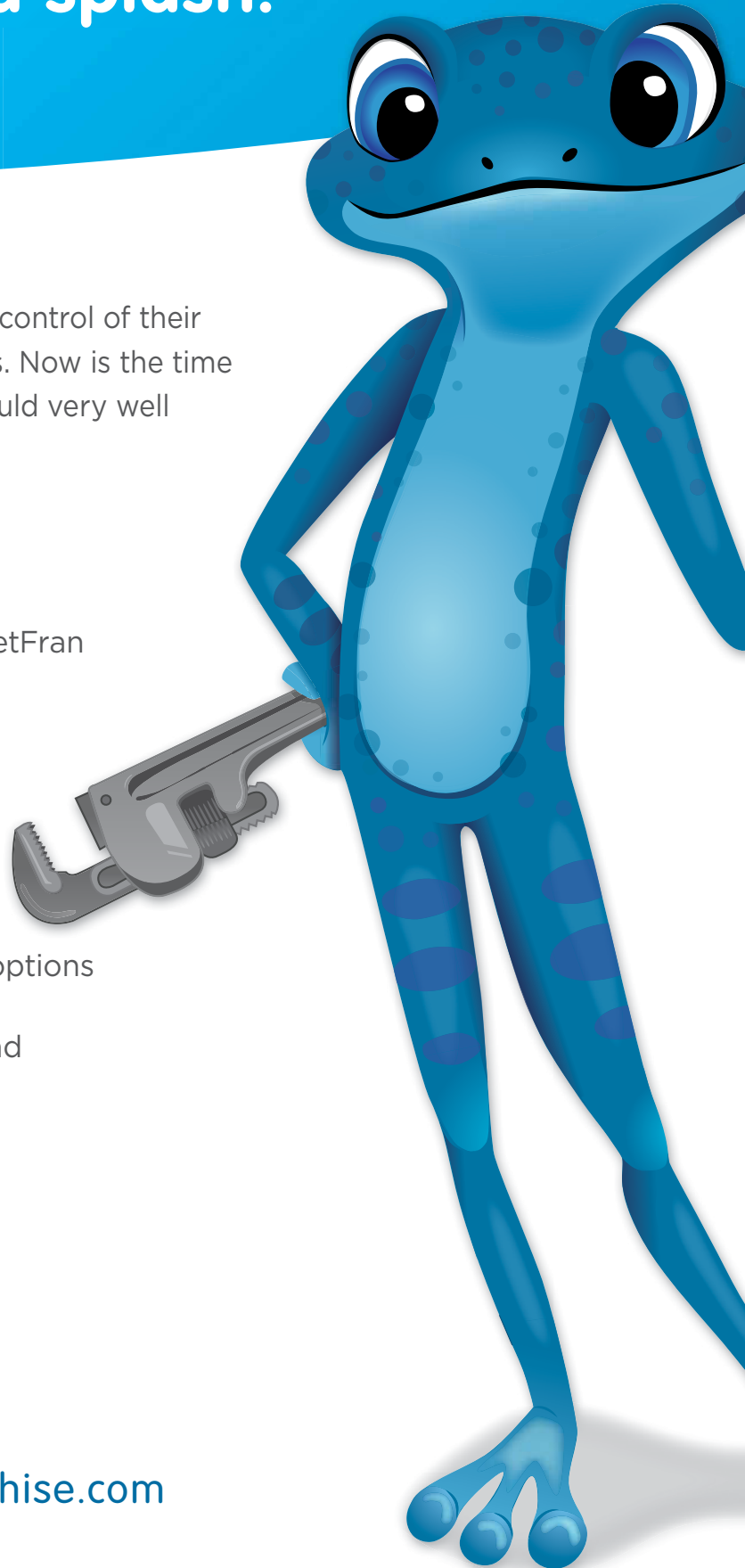
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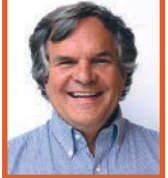
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Bob Kendall,
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Changing with the Times

The industry is growing and evolving, and so is your trade show

By Bob Kendall

During late winter 1981, the first annual Liquid Waste Hauler's Equipment & Trade Show was held in Nashville, Tenn. The show was promoted to the 12,000-some readers of the recently launched *Midwest Pumper*. That very first show was a huge success – lauded by the couple hundred people who attended and a few dozen exhibitors.

The following year, the Liquid Waste Hauler's Equipment & Trade Show would see its first name change. The change was subtle: we only added one word – “International.” Because, after all, we didn't want to shun our friends from Canada.

In 1984, COLE Publishing launched an additional title – *Cleaner* – aimed squarely at sewer and drain cleaning contractors. This meant the show had now become more than just a liquid waste event. It would take more than a decade, but in the mid-1990s the International Liquid Waste Hauler's Show again changed its name. This time, we would fully encompass everything we stood for – The Pumper & Cleaner Environmental Expo International. May no man, woman, child, country or profession ever be excluded again! So we thought.

The event would continue to grow, eventually hundreds of attendees became thousands, and dozens of exhibitors became hundreds. The Expo hopped through several cities – Nashville, Biloxi, New Orleans, Dallas, Fort Worth and Louisville. We even tried a few western destinations and visited Las Vegas, Palm Springs, Phoenix and Long Beach.

Now, after more than 20 years, it is time to make another name change. We're not just a show for “pumpers and cleaners” – we've grown and evolved into so much more, and so have you. The industry and profession has surpassed what many of us could have ever imagined way back in 1979, when *Pumper* was delivered to mailboxes across a few Midwestern states.

In 2015, the Pumper & Cleaner Environmental Expo International will become WWETT – the Water and Wastewater Equipment, Treatment & Transport show. A little better snapshot of what we have become and where we are heading. It's a show for an entire industry of hard-working people who maintain the flow in our sewer and water infrastructure, properly treat and dispose of wastewater, keep water safe, and our environment healthy.

We haven't forgotten our roots, we just planted them a little deeper – and thanks to you they'll always have water. See you at WWETT 2015. **c**



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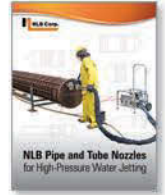
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Luke Laggis
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Born from Opportunity

Keep your eyes open and focus on the future of your business, and success will follow

By Luke Laggis

Welcome to the 2014 Pumper & Cleaner Environmental Expo show issue of *Cleaner*. I hope you've made it to Indy and are excited to take in all the Expo has to offer.

I'm looking forward to talking to as many of you as possible, getting your feedback, listening to the issues you're facing and hearing your stories. We have two good contractor profiles in this month's issue. Both company owners were at last year's Expo.

BlueWorks Inc., based in Clearwater, Fla., has established itself as the go-to contractor for small-diameter pipe rehabilitation in its service area. The company works primarily in high-rise residential complexes. While most contractors look at going bigger, BlueWorks has gone smaller, specializing in 8-inch and smaller lines.

I'm looking forward to talking to as many of you as possible, getting your feedback, listening to the issues you're facing and hearing your stories.

The company serves the entire state of Florida, generating approximately 85 percent of its business through full rehabilitation projects involving televising, cleaning and relining of the pipes in large buildings. It's small-diameter work, on a large scale, and one of the most interesting aspects of the story is how the company's leadership saw opportunity in an untapped market and aggressively pursued it. They've truly carved out their own niche, and have found great success by doing things the right way.

Bill Heinselman, owner of Express Sewer & Drain in Rancho Cordova, Calif., also turned an opportunity into a successful business. Heinselman had spent many years on the municipal side of the industry, operating cleaning and inspection equipment as a sewer district supervisor.

But Heinselman wanted to run his own company. He established Express Sewer & Drain in 2007, targeting a residential and commercial customer base, but he quickly realized there was greater opportunity in the municipal market. All it took was one small municipal job to see the potential.

While he was employed by the sanitation district he didn't see all the subcontracted work, but once he was out on his own the volume of available work became clear. He could see the possibilities for growth by serving the sewer agencies in Northern California, and began adding services. First pipe bursting, then CIPP lining and eventually CCTV work.

Heinselman had found the path to success, and he equipped himself to follow it. Today, he has 20 employees, a long list of clients, and a fleet of equipment that includes three Vac-Con units, a CUES inspection truck and two US Jetting trailer jetters.

ENJOY THE SHOW

The Pumper & Cleaner Environmental Expo is also full of opportunities for your business. From the moment you leave your hotel room to the very end of the night, in the elevator on the way down to the lobby, at breakfast, on the walk to the convention center and all throughout the day, you'll have no problem striking up conversations with your peers. So take advantage, the insight you gain could make all the difference for you and your company.

Plenty of educational seminars are also scheduled during the show to help you improve and expand your operations. And of course there are tools and trucks – lots of them. Take it all in, and enjoy the show.

Welcome to Indy! **c**

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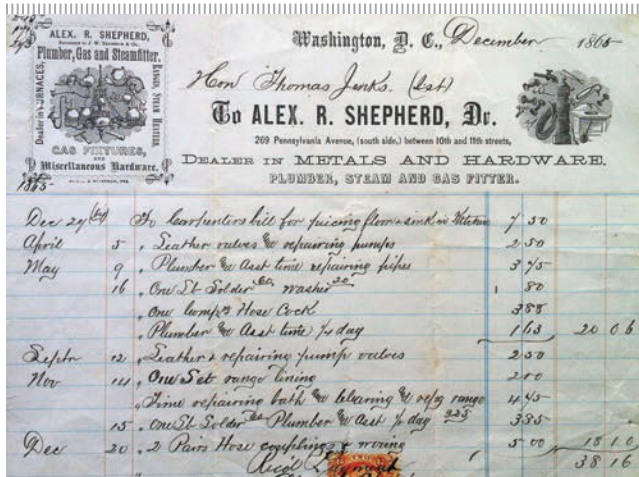
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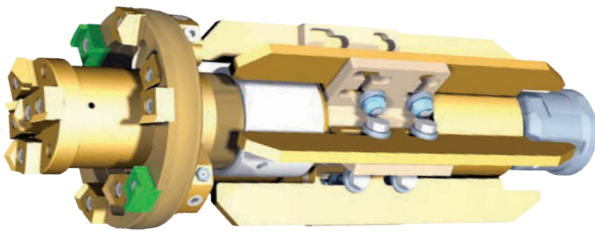


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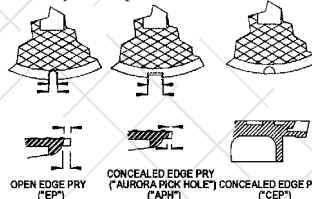
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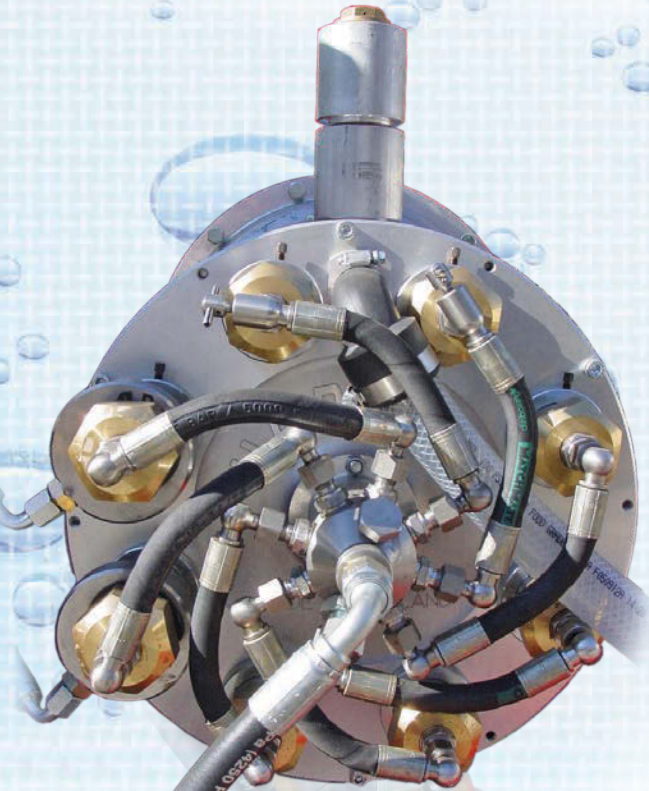
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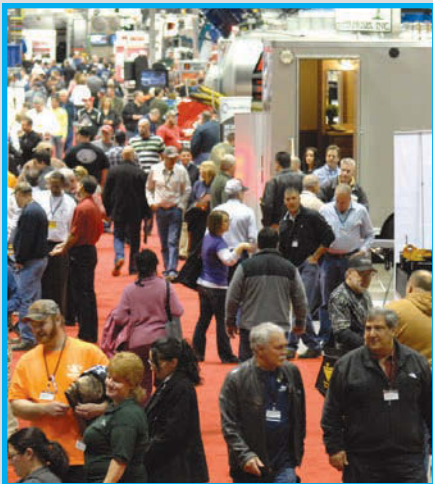
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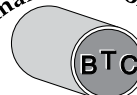
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COVER STORY



Express Sewer & Drain hydro operator William Blake, left, and owner/operator Bill Heinselman use the Perma-Liner Top Gun inversion unit to install a liner. (Photo by Sang Heinselman)

BUILDING BLOCKS

CALIFORNIA CLEANING CONTRACTOR STARTS WITH A FOCUS ON RESIDENTIAL CUSTOMERS, AND ALONG THE WAY FINDS OTHER AVENUES TO PROFITABILITY

BY MARIAN BOND

PHOTOGRAPHY BY LEZLIE STERLING

Four years after establishing his company in the Northern California suburb of Rancho Cordova, Bill Heinselman was stunned when he was offered \$1.5 million for the operation. The deal also included a lucrative salary and benefits package for Heinselman and his wife, Sang, a civil engineer who runs the office and handles project management and bid proposals.

“I was flattered,” Heinselman says. “But we had doubled our revenue from 2010 to 2011. At the time of the offer – it was May – we had done \$800,000 in revenue, which was what we had seen the entire year before. I expected we would surpass the \$1.5 million for that year, which we eventually did. I thanked them, but had to decline. I didn’t want to sell my business.”

Heinselman says in 2013, the company cleaned more than 3 million linear feet of sewer main and grossed \$4 million in revenue. He estimates they replace 400 to 500 Orangeburg and vitrified clay sewer laterals every year in Northern California, and they recently traveled some 450 miles to Beverly Hills to work as a subcontractor on a one-day relining project on a 12-inch mainline storm drain.

Before opening Express Sewer & Drain, Heinselman worked for 14 years at a sewer district in Northern California, where he handled equipment as a supervisor – running the Vac-Cons and CCTV trucks, managing a backhoe crew, installing sewers and dealing with manholes and water mains. But Heinselman wasn’t satisfied. He wanted to run his own company, and he had specific ideas regarding customer service and pricing. He didn’t, however, envision the turn of events as the operation took off, nor did he expect the exponential growth he would enjoy.

“When I first started, I envisioned working for and helping a



Express Sewer & Drain camera operator Alan Smith prepares the CUES camera and monitors an inspection job inside the CCTV truck.

residential and commercial customer base, but the business just exploded,” he says. “I found that as I did a good job for one customer, they would tell somebody else. I initially hired my brother Jerry [Heinselman] who had a similar background as mine, and then I added more technicians and plumbers.”

Heinselman found there was a much greater demand for his services in the contractor and municipal communities.

“Initially I had not factored in the possibilities with municipalities,” he says. “But we bid on a small municipal job, and when we completed that job I realized that as a contractor I saw a big difference as opposed



Alan Smith checks over the CUES camera prior to launching it on an inspection job in Rancho Cordova, Calif.

to when I worked in the field. Plus this work is entirely different than residential, where there is the emotional involvement – the homeowner trying to decide which problem to solve. I realized there was a ton of work out there with the municipalities as well as other contractors, including plumbing companies. I simply had not realized the potential. I really went after that work. When I was employed in the field for the sanitation district I was not seeing what was contracted out and did not know all those jobs were out there. I began to see the possibilities of growing the company by serving the sewer agencies in Northern California alone. There is that much work.

“When I first started, I envisioned working for and helping a residential and commercial customer base, but the business just exploded. I found that as I did a good job for one customer, they would tell somebody else.”

Bill Heinselman

“The larger municipalities have their own equipment, and they use it all the time,” he says. “But they also need to bring in outside contractors to keep up with all of the various agencies and mandates for cleaning, repair and rehab called for yearly in the state, as well as the water-quality board calling for mainline cleaning, TV inspection, pipe bursting and more. When I saw all this work on the bid boards, I knew I was going to be doing this work.”

He says small municipalities also need to meet requirements, but they don’t always have big pieces of equipment, which means more opportunity for outside contractors.

STEPPING OUT IN THE MARKET PLACE

Heinselman added pipe bursting to the menu in 2009. It was a major step for the young entrepreneur, and it set the pattern for his future endeavors and company culture.

Pipe bursting has been around in the Sacramento area for about 16 years. Residential customers are aware of it, and will generally call to get a quote on a “trenchless line replacement.” So offering this service seemed the right thing to do.

“We had a job lined up, but the subcontractor we engaged would not show up as scheduled,” Heinselman says. “We complained, and he more or less told us to go out and buy our own equipment, not in the kindest terms. That’s just what I did. We purchased the system by TRIC Tools Inc. and that was the smartest thing I did in the beginning. It was a lot of money for a small company – \$35,000 – but it paid for itself in two months.”

profile

**EXPRESS SEWER & DRAIN,
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AND THROUGHOUT CALIFORNIA

OWNER: Bill Heinselman

ESTABLISHED: 2007

SERVICES: Drain cleaning and repair, CCTV, CIPP, pipe bursting, hydroexcavation, plumbing

CUSTOMER BASE: Residential, commercial, municipal, contractor

EMPLOYEES: 20

WEBSITE: www.expresssewer.com

34 Cleaner • March 2014

AT THE TOP OF THE GAME

When Bill Heinselmann began promoting Express Sewer & Drain, he took a look at one of the major competitors in the area and noticed they were spending a lot of money on marketing, bringing in trainers to teach technicians to sell the job.

Heinselmann's plan was to concentrate on customer service at a good price instead of sales. He wanted to focus on volume and a bigger piece of the pie while building relationships.

Developing the right crew of motivated technicians to make these strides forward can be challenging. The right candidate needs to work hard, want to learn and be a team player.

He purchased TRIC's 20-ton X20 system, and transports it in an unmarked pipe bursting trailer so it can be on the job for other plumbing companies.

Pipe bursting is more popular in Northern California, particularly in earthquake-prone areas, because HDPE pipe is so strong. However, lining has also found an important niche.

In 2009, Express took on a job for a homeowners' association that needed 700 feet of 6-inch pipe relined. Heinselmann subbed out the relining work.

"I thought it was the coolest thing I ever saw," he says. "They did that pipe in one day. It was amazing. I said 'I'm going to start doing this.'"

He added Perma-Liner Industries' lateral lining system with a 26-foot lateral lining trailer and began relining in 2010.

CONTINUED >>



Aaron Gomez, an assistant technician with Express Sewer & Drain, feeds liner from a refrigerated truck into the Perma-Liner Top Gun inverter on a recent job. (Photo by Sang Heinselmann)

"My guys can fix anything. Fabricate. Weld. They are smart and they are go-getters," he says. "We want them to have their CDL, and we train them to pass the test. We do a lot of in-house training, and bring in trainers from Perma-Liner, trainers for confined-space entry, and other manufacturers and procedures, as well as for safety training. The company pays for all training."

From a humble beginning, the company now consists of 40 percent residential and commercial, 35 percent municipal and government contracts and 25 percent with other plumbing/engineering companies

"I count my blessings every day," he says. "But I'm not satisfied to stay where I am. I am always looking around for other opportunities and ways to offer bigger and more challenging steps for the company, my team and my customers. I'm proud of the company and just want to make it better in every possible way."

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Russell Vankampen, left, and Ruvim Oleyic of Express Sewer & Drain prep the 4-inch liner inside a specialized trailer used for lateral lining. (Photo by Sang Heinselman)

One piece of the puzzle always leads to another for this owner.

“We were doing the lateral CIPP lines, but had a lot of mainline jobs. We added Perma-Liner’s Perma-Main Top Gun F-10 main lining system, and Perma-Liner’s point repair system, sending us further into municipal work,” Heinselman says.

“I realized there was a ton of work out there with the municipalities as well as other contractors, including plumbing companies. I simply had not realized the potential. I really went after that work.”

Bill Heinselman

Another segment they were not bidding was CCTV, but in 2012 they added a 2012 Ford F-550 CUES TV truck with two CUES OZIII cameras and transporters. The truck is also equipped with Bowman 430 Dominator lateral reinstatement cutters and controllers and the K2 operating system, which is used in relining mainlines.

The Express fleet also includes three Vac-Cons – a Hot Shot, V230 and V309 – and two US Jetting trailer jetters, which produce 4,000 psi/18 gpm with Enz and StoneAge nozzles on the business end. Additional cameras and locators are from RIDGID.

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Heinselman runs his enterprise from a state-of-the-art complex situated on a 1.5-acre property in an industrial area. The yard is cement, with a 6,000-square-foot warehouse and 2,000-square-foot office. The extensive and expensive equipment is secured behind an 8-foot fence with barbed wire and razor wire at the top and infrared beams around the yard – plus a camera system monitored around the clock by a security company. Automatic gates open and close with a card lock system. Employees scan in and out, and this movement is tracked. Entry into the office is also scanned.

FIRST CLASS TICKET

Heinselman credits much of his success to the high priority he places on quality equipment. He says he's willing to pay for the best equipment and then go out and pound the pavement to make the sale.

The equipment list got another boost when he added a PipeHunter Sidekick Articulating Easement Hydro Jetter, which lets workers maneuver into tight places such as easements



Bill and Sang Heinselman, along with their son Billy, 5, stand in front of one of the Vac-Con trucks along with some of their crew members at Express Sewer & Drain in Rancho Cordova.

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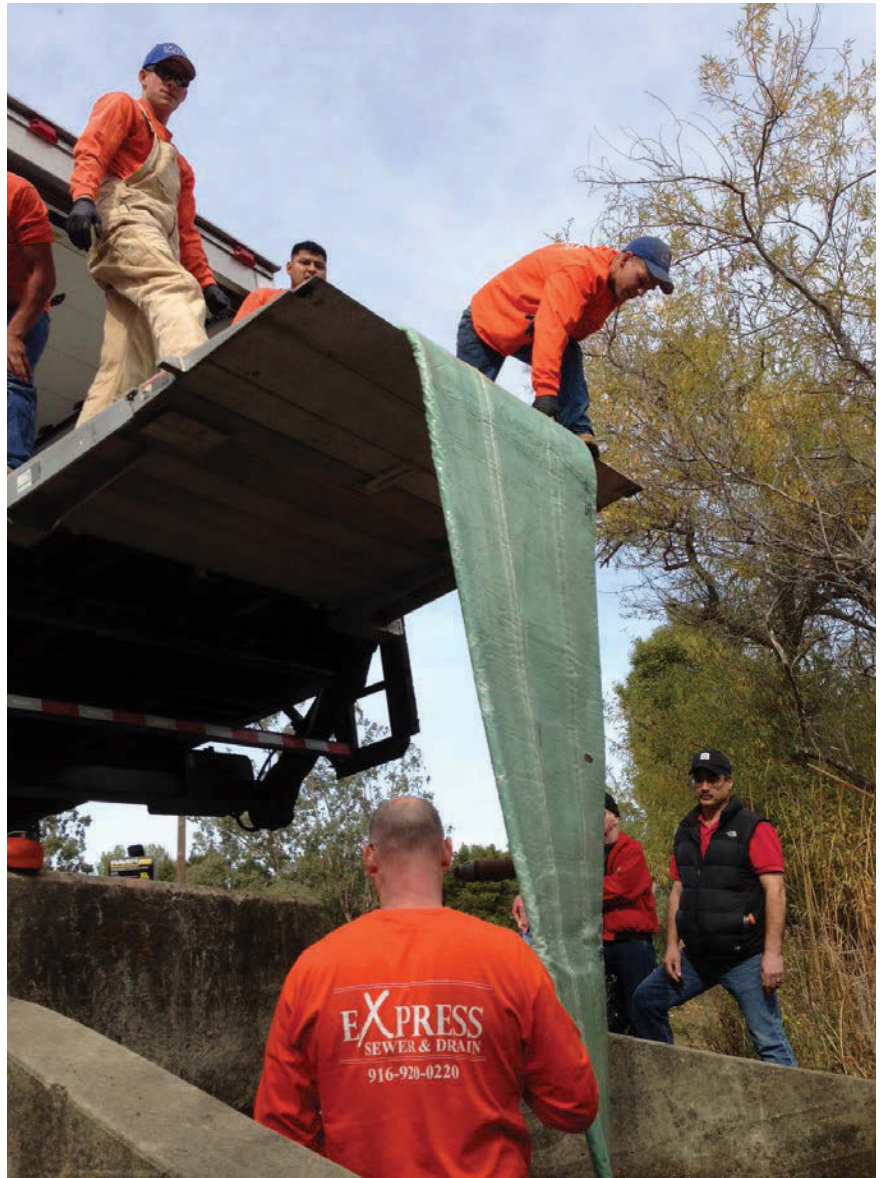
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ABOVE: Miguel Romero of Express Sewer & Drain guides liner into a 30-inch storm drain culvert on a recent CIPP lining project. >> Dillon Moore and William Blake unload liner from a refrigerated truck and feed it into the culvert. (Photos by Bill Heinselmann)



“We are a 24/7 operation, but we do not charge overtime. Our rates remain the same whatever time of day or night we go out. These customers appreciate our service and our perks and they are impressed with our outstanding equipment.”

Bill Heinselmann

and backyards. A recent job for a local sanitation district involved cleaning a 12-inch mainline running through a canyon. The machine works with their Vac-Con Hot Shot truck. They can run hose up to 1,000 feet from the truck, and then clean 600 feet of pipe.

“It is another service that keeps the phone ringing,” he says.

Heinselmann describes himself as a guy who gets things done for customers.

“I like to think I can do anything, and do it for less money than my competitors,” he says. “We want to make money, but if we go out and have an 85-year-old woman who has a problem, but clearly has limited finances, we will get the job done and not charge if that is what it takes.

“We offer free video inspection on every residential/commercial job we do. We are a 24/7 operation, but we do not charge overtime. Our rates remain the same whatever time of day or night we go out. These customers appreciate our service and our perks and they are impressed with our outstanding equipment. Ninety percent of the time in the residential lateral there is not a problem, but the customer can check it out and they are amazed with the equipment.”

Although Heinselmann appreciates new technology, he understands there is a place for tried and true practices. He recently purchased a 2013 Peterbilt 337 5-yard dump truck, a 2014 Caterpillar 420 F backhoe and a 2013 Caterpillar 301.7D mini-excavator.

“There is definitely a need for the older applications,” he says. “There are contracts that we cannot perform unless we have that equipment, and we want to be the company that does it all.

“In the market today, you have to make your decisions, and you have to figure out what jobs are out there, who your customers are, and determine their needs and the best products to utilize.”

Heinselmann keeps his eye on all activities in his area of service. “We are learning, and we are watching, and we believe we will continue to see lucrative growth in our company as we move forward.” **C**

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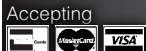
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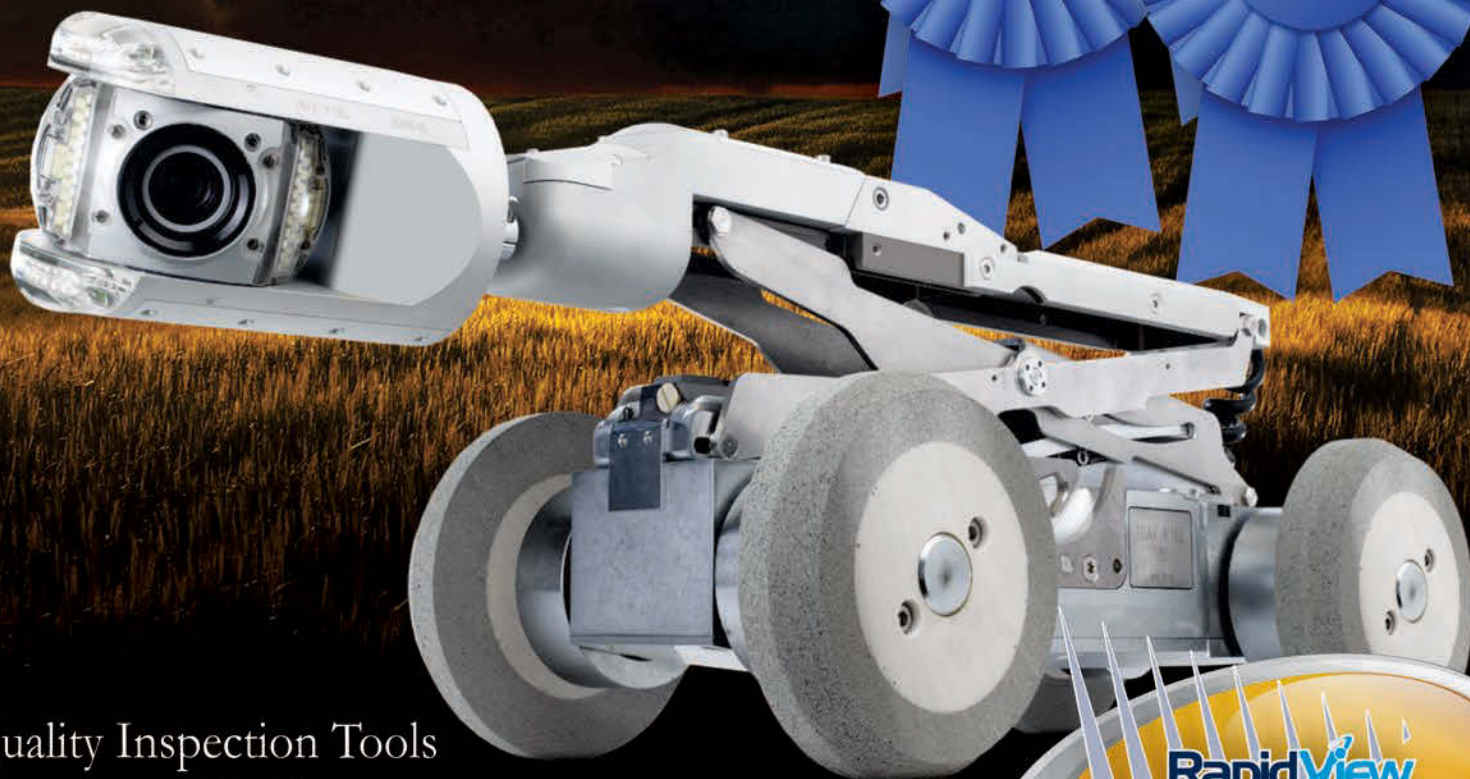
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Work Not for the Weary

Getting proper rest is an important factor in preventing workplace accidents

By Doug Day

It's happened to most of us: You pull into the driveway after a long day and don't remember the last 15 minutes of your commute. Did you run that stop sign down the block? It's a bit of a scary feeling.

"The quality and quantity of sleep directly impacts performance components including concentration, information processing, judgment, reaction time and teamwork," according to Nancy Rothstein, author of "Optimizing Sleep for an Optimal Workforce in the Oil, Gas and Mining Industries." While Rothstein wasn't writing specifically for the sewer and drain cleaning industry, the statement still applies.

"The quality and quantity of sleep directly impacts performance components including concentration, information processing, judgment, reaction time and teamwork."

Nancy Rothstein

The National Highway Traffic Safety Administration, meanwhile, says drowsy driving kills about 1,550 people every year. Various studies in France, Australia and elsewhere have found that driving sleepy is just as dangerous as driving drunk. Researchers at Utrecht University in the Netherlands found that two hours of continuous nighttime driving was comparable to driving with a blood alcohol concentration 0.05 percent; three hours was equal to driving with a BAC of 0.08 percent (legal intoxication); 4 1/2 hours was equal to a BAC of 0.10.

Harvard Medical School analysis of data from the America Insomnia Survey, meanwhile, pegs the cost of accidents and errors caused by lack of

sleep at \$31 billion a year, estimating that seven percent of workplace accidents and errors were attributed to tired workers.

Rothstein, known as the Sleep Ambassador (www.thesleepambassador.com), presents many other research findings in her white paper about how sleep impacts various parts of a worker's life such as performance, productivity, safety and accidents, operating vehicles or machines, and overall health problems such as obesity and high blood pressure.

While OSHA has no regulations concerning sleepy workers, it has issued guidance concerning extended or unusual work shifts, saying they "may be more stressful physically, mentally and emotionally" and can lead to an increased risk of operator error, injuries and accidents.

Among OSHA's recommendations:

- Add additional break periods and meals when shifts are extended past normal work periods.
- Tasks that require heavy physical labor or intense concentration should be performed at the beginning of the shift if possible.
- Learn to recognize signs and symptoms and monitor for fatigue. Any employee showing such signs should be evaluated and possibly directed to seek rest.
- Allow time for adequate rest and recovery. Extended shifts should not be maintained for more than a few days, especially if they require heavy physical or mental exertion.
- Staff adequately to enable workers to take breaks, eat meals, relax and sleep.
- If at remote sites, ensure, as far as possible, that there is a quiet, secluded area designated for rest and recuperation.
- Plan for regular and frequent breaks throughout the shift. In addition to formal breaks such as lunch or dinner, encourage the use of micro breaks to change positions, move about and shift concentration.

For workers in every industry, getting adequate sleep every night can reduce the risk of injury or mistakes. Maybe our kindergarten teachers were right. The solution just might be a good nap every day! **c**

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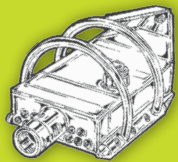


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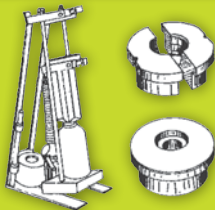
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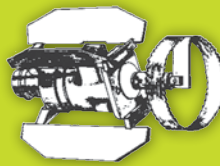
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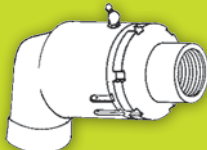
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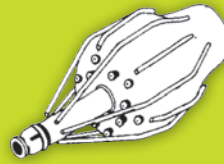
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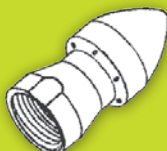
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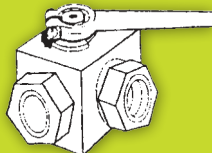
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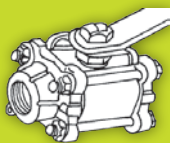
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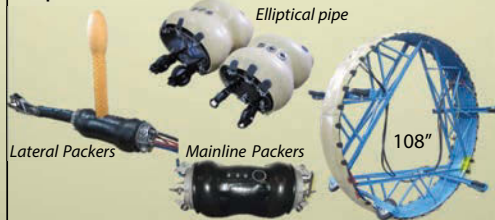


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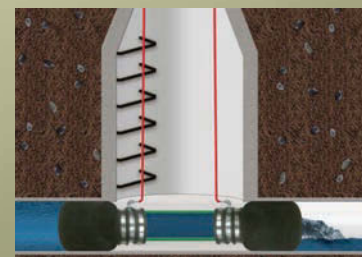
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RISING Above the REST

BY MARIAN BOND



FOCUSING ON SMALLER PIPELINES IN LARGE FACILITIES GIVES STARTUP COMPANY A STRONG Foothold IN A SOMETIMES OVERLOOKED SECTOR OF THE INDUSTRY

PHOTOGRAPHY BY ARMANDO SOLARES/SOLARES PHOTOGRAPHY.COM

Many contractors focus on residential work or larger municipal jobs. BlueWorks Inc, based in Clearwater, Fla., has combined aspects of both in carving out a specific niche in the pipeline rehabilitation market.

The company's bread and butter is the labyrinth of small-diameter pipe hiding in the floors and walls of high-rise residential

complexes. The majority of BlueWorks' contracts last about 30 days and involve large structures that are more than 25 years old. In a space of 5,000 square feet there can be 150 different pipes of various sizes that need to be televised, cleaned, and sometimes replaced or relined.

Jeremy Schultz, managing director of BlueWorks Inc., says that the company specializes in these 6-inch and smaller lines. In 2013, they grossed \$3 million in small-diameter work and completed a cleaning and relining project involving the 18-story Monaco Beach Club in Naples, Fla., that lasted seven months. They cleaned and relined 10,000 linear feet of pipe in the high-rise complex.

"We consider ourselves a plumbing restoration company, and our goal is to restore the systems we service to 100 percent operating efficiency," Schultz says. "To accomplish this we use a myriad of techniques to get a system up and running properly. We do a lot of investigative work before executing a contract. We want to take care of our customers. We use diagnostics to identify the proper scope of work, and this takes a lot more legwork than other aspects of the business.

"In an 18-story, 130-unit, high-rise condominium there is more piping than there is in the road in front of the building," he says. "Smaller pipes have more bends and more utilities attached. It requires exhaustive diagnostics to identify the proper scope of work."

OPPORTUNITY KNOCKS

Schultz, who is a master plumber with a long history in the industry, believes this market is overlooked by many, but is an opportunity for the company he represents. While they focus on the large complexes and smaller pipes, they also respond to residential requests and handle lateral lines and large diameter storm and sewer lines.

"In our work with high-rise buildings, we use mechanical cleaning and our Vermeer vacuum equipment," he says. "Our staff, on a job, typically needs more than one camera on the truck to televise multiple pipe sizes and configurations."

Mechanical cleaning is accomplished using a Picote Oy Ltd. machine, which gently scrubs the inside of the pipe, rather than more traditional jetting, which runs the risk of damaging failing cast-iron piping. The method of cleaning must match the pipe. BlueWorks handles a range of piping, from cast iron to



The BlueWorks team includes (back, from left) Managing Director Jeremy Schultz, General Manager Erin Dunham, project managers Anna Peterson and Chris Barsel, and pipe restoration specialists Lovell Thomas and Eric Pinto. Pipe restoration specialists Brendyn Marsee and Joel Galindo are in front.

BLUEWORKS, INC., CLEARWATER, FLORIDA, SERVING ALL THE STATE



profile

MANAGING DIRECTOR: Jeremy Schultz

ESTABLISHED: 2011

SERVICES: CCTV, jetting, cleaning, repair, relining

CUSTOMER BASE: High rise apartments, condominium complexes, aged care facilities, mobile home parks, residential

EMPLOYEES: 22

WEBSITE: www.blueworkscountry.com



BlueWorks project manager Chris Barsel keeps an eye on the RIDGID SeeSnake monitor as he feeds the camera down the line during an inspection of a vertical stack.

“The most important part of lining is the cleaning. If the line is not cleaned properly, you cannot line it. We will often televise a line four times to make sure it is ready for relining.”

Jeremy Schultz

a Vac-Tron Hydro Excavator and the Vermeer Mighty Mole Hydrovac.

“The most important part of lining is the cleaning,” he says. “If the line is not cleaned properly, you cannot line it. We will often televise a line four times to make sure it is ready for relining. We can reline even those 2-inch lines; however we do not always reline. In many cases, traditional replacement is the best and only way to take care of the customer’s problem.”

clay to corrugated metal to concrete and new HDPE to slow deflection issues. Any of these lines can be relined. They are often deteriorated, are sometimes cracked or have buildups causing leaks.

When jetting is called for, they turn to a pair of US Jetting trailer jettors that supply 18 gpm with both 3/8- and 1/2-inch hoses. There is also a Honda jetter with 3/8-inch hose, and they lease a drop axle Vac-Tron with a 3/4-inch hose.

For smaller diameter pipes they have Vermeer vacuums. They have

He says that in a high-rise building they could be lining as much as 10,000 feet, which can be very challenging. “You have to get it right.”

Schultz has no qualms about noting the most important piece of equipment: “The cameras. The job requires good working cameras. If you don’t have a camera you are lost,” he says. “We have to have a variety in order to perform, and they must be available when needed.”

Liners are prepared outside the building and brought in for installation. Cameras are easily moved about within a building. They have a variety of cameras, reels and cable capable of reaching 200 to 300 feet down a line.

There are no typical lengths of pipe to be relined. It can be 300 feet or less than 10. A lateral branch line can be from 2 to 200 feet.

They have the capability to reline through pipe size transitions by doing one length and then overlapping the next size going in the direction of the flow of the pipe, then going back with the Picote machine to smooth out the transition.

“BlueWorks is certified for the Perma-Liner Industries inversion, pull-in-place, continuous inversion spot repair and lateral lining technologies. We recently completed lining 2 miles of 3- to 6-inch piping at the Monaco Beach Club utilizing Perma-Liner technologies.

“Most of our smaller diameter equipment is from Perma-Liner, and includes a continuous inverter, mini inverter steam unit and PIP spot repair

gear,” Schultz says. “Also their mini reinstatement cutter, and we have an 18-foot Perma-Liner lateral lining trailer.”

When they have a call for lining larger diameter pipe, they use Masterliner Inc. These liners are typically installed with a platform truck or scaffolding using water inversion.

“We utilize a boiler for this, either the one on the platform truck or we rent one,” Schultz says. “Our group has a 10-year-old International 10 million Btu platform rig.”

Their CCTV truck is a CUES 2009 Ford with two CUES crawler cameras and a CUES cart-mounted camera system.



The BlueWorks crew cleans and prepares a sewer main for lining.

EARLY DIAGNOSIS

BlueWorks covers the entire state, and when they get a call with a request for a proposal, there are a lot of questions to be answered. They want a good overview of what the customer is experiencing, whether it’s a percolating problem, burping, blackwater events, back pressure or backflow issues. The office staff, under the guidance of General Manager Erin Dunham, will handle this initially.

“We try to understand the problems, get an assessment before sending out a technician,” Schultz says. “We also like to identify the customer needs. Is it a budget issue as well? We usually work with



REACH.

WORKING ON THE FRONT LINES

Jeremy Schultz operates BlueWorks Inc. with a hands-on approach. He relies on a trained staff, but is very much involved in the work. He visits each project on a regular basis, and is involved from the proposal stage through the conclusion. In many cases, Schultz relies heavily on guidance from Morgan Trouard from Perma-Liner Industries.

“I believe in being out in the field, working with the technicians, not always as a general contractor sitting in an office looking at the numbers,” Schultz says. “I want to be out defining problems, finding the right solution, at least a portion of every week.”

Since branding the business in 2011, Schultz has seen significant changes in technology with many more options available, from steam cured products to new cleaning systems.

“This work and the future is exciting for me,” he says. “If someone does not like working with sewer pipes, this is not the job for them. As for me, I like my job.”

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a board of directors. We like to make recommendations before we start any work.

“Often when they first call they will tell us it is in the stacks, but usually it is something in the ground causing the stack to back up.

“Blackwater losses are extremely expensive. Who wants to be on the second floor of a high-rise with sewer sludge dripping down the wall or mold growing behind the cabinets.”

When they complete a large project, they will have an engineering firm verify their work to catch anything they missed and have a third party involved so nobody gets bullied or taken advantage of.

After more than 15 years in the business and over \$30 million dollars of exposure in the past five years, Schultz knows that problems in these facilities have to be dealt with promptly and thoroughly.

THE PR FACTOR

Working in buildings where people reside has specific requirements. In assisted living homes, the residents are often interested in what is going on, and the staff is careful to understand and respond courteously. Plus there is the need for protection, and putting up barricades and notices. They usually have a staging area outside the building on these types of projects, and often work from the roof downstream to an access point in the building.

In the larger condominium complexes they have to work in sections. One section will be isolated while the system is down. Preparation will begin early in the morning, but the water will not be turned off until 9 a.m. so the residents will have a chance to shower and go about their normal morning routines. Services are restored by 5 p.m. Here again, notices must be posted.

“Blackwater losses are extremely expensive. Who wants to be on the second floor of a high-rise with sewer sludge dripping down the wall or mold growing behind the cabinets?”

Jeremy Schultz

Approximately 85 percent of business is generated through full rehabilitation projects involving televising, cleaning and relining of the pipes, with the majority of time spent in the preparation process. The 15 percent balance is generated from smaller video, cleaning and replacement jobs, as well as other ancillary work.

BlueWorks currently employs 15 technicians, and Schultz is specific about requirements during the hiring process. Total staff is 22.

“We are a unique boutique operation,” he says. “Recent use of drugs or alcohol abuse is not acceptable. We can’t have that going on. We want to work with someone who is interested in a long career with the company. We do



Eric Pinto uncoils a vacuum hose while the crew cleans and inspects a sewer main.

our own training because we are not like a NASSCO seminar where you can pull out a spec book.

“We will interview up to 15 people, and select one applicant and work with him for two weeks. Our staff has a lot of experience; I have a lot of experience. In two weeks we can pick up the traits that will or will not work for us. If this is not our candidate, we will pay generously, thank him for his time and move on.

“Attitude is important. An inexperienced guy with a phenomenal attitude and a desire to better himself has it over the guy with a bad attitude who knows how to run equipment.

“An old joke is that every new employee’s baggage is only two weeks behind him, so usually by the end of four weeks we can tell if this is our candidate.”

He adds that they like to hire those who have served in the military whenever possible.

Chris Barsel, project manager and a former Marine, heads a very qualified staff, from the office through technicians and others. Schultz and Barsel are actively involved in the contracts and proposals, and meet with the customers before a contract is signed and throughout the project.

BlueWorks typically has three to four large contracts in progress throughout the state and into the Florida Keys, with crews of three to five technicians on site. The company will often rent a home for the workers when they are working out of town, and they’ll spend five days each week at the project until completion. Technicians can be dispatched to handle issues and arrive within four hours in any given area of the state.

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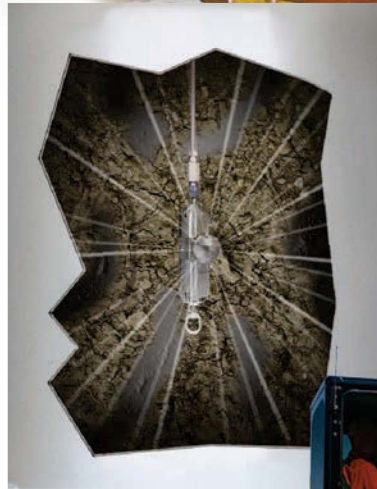
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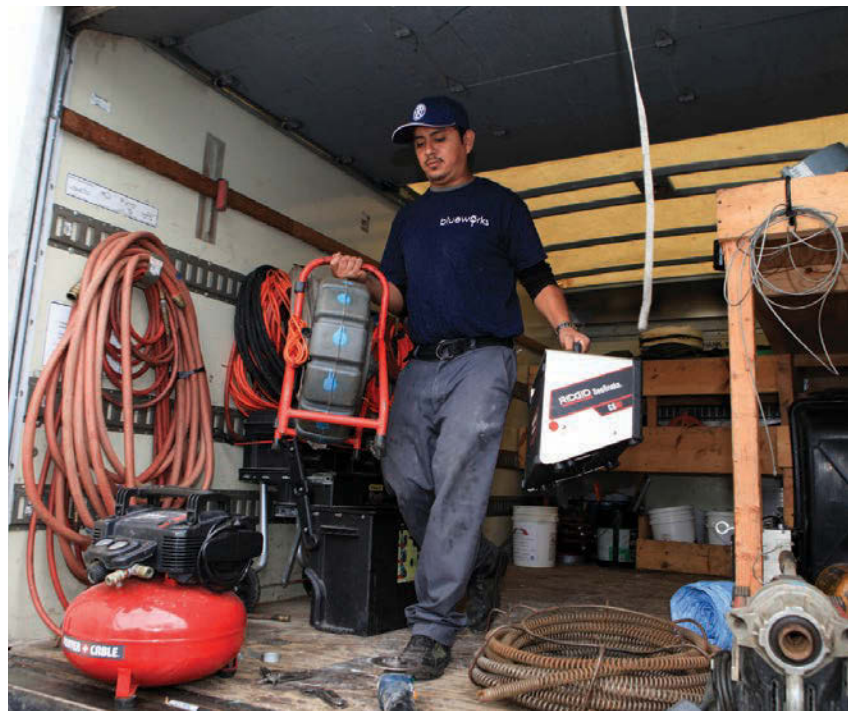
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Eric Pinto carries inspection equipment out of the truck at the start of a sewer main project.

“Attitude is important. An inexperienced guy with a phenomenal attitude and a desire to better himself has it over the guy with a bad attitude who knows how to run equipment.”

Jeremy Schultz

In Clearwater, they operate out of an office and warehouse facility, and there is also an office in Naples. Additionally, they have a laydown yard in Jacksonville where they can park equipment. Because of the weather concerns during hurricane season, their equipment is extremely mobile, mostly housed in box trucks or trailers for easy removal, even when on a work site.

“Equipment and tools are supposed to be on the trucks, not on the shop shelf but out on a job,” Schultz says. “BlueWorks knows its employees care about their gear, because our employees know we care about them.”

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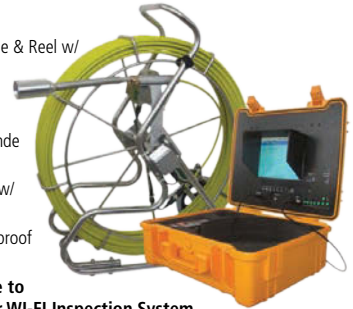


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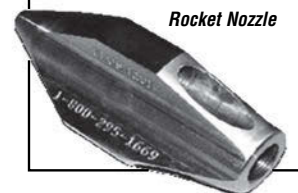
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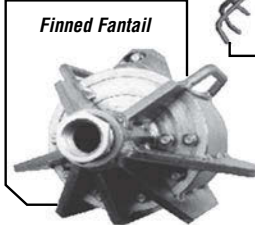
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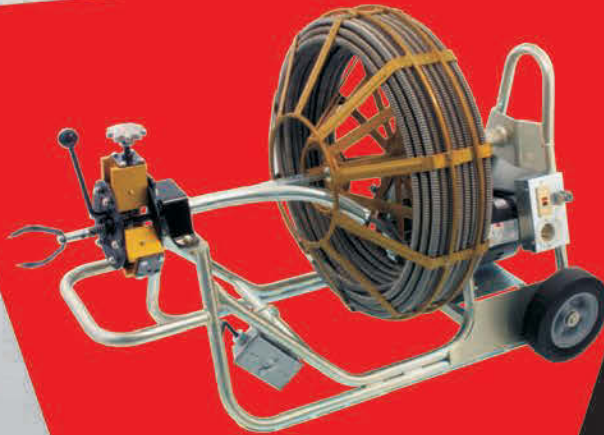
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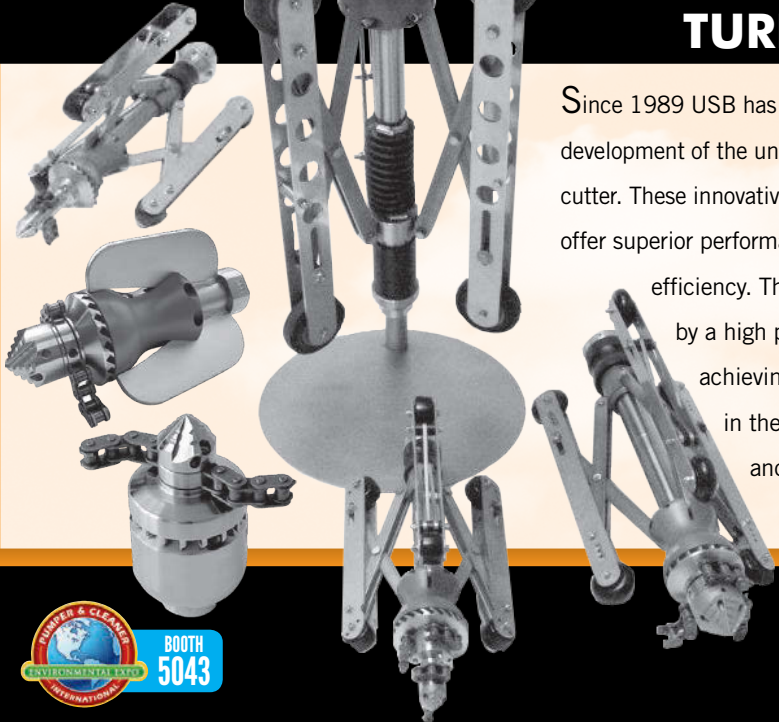
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Building Company Character

Prevent ethical breakdowns by establishing a mission statement and leading by example

By Stan Craig

Ethics and values are eroding across a wide spectrum of government, organizational and corporate sectors around the world. Bribes, cheating, criminal behavior, sexual abuse and harassment are becoming commonplace.

A nationwide survey on workplace ethics in 2011 opened with this startling statement, “Based on what we see now, we expect workplace ethics to decline.” That is a powerful and alarming comment, but it is based on solid research from the Ethics Resource Center.

It seems as if not a day passes by without a new story about ethical breakdowns. From doping athletes in baseball and cycling being stripped of titles and victories to politicians who behave as if sexual harassment and financial self-dealing are privileges of office, the stories are never ending.

Why are ethics in decline for individuals and corporations?

- A me-first attitude that places corporate interests and individual pleasure or gratification before all other ethical responsibilities.
- A craving for power, status, wealth and recognition that sees people, family, friends and others as tools to be used whenever necessary.
- An “everybody is doing it” attitude that implies permission for any behavior.
- A lack of accountability, which makes ethical misconduct a personal matter.

- A social acceptance of wrong-doing as a way to succeed, stand out and achieve goals without the out-of-date restraints of the past.
- A focus on short-term benefits at the expense of quality, value and integrity.

The good news is that you can prevent ethical issues in your company by making ethical behavior a priority. Here are a few ways to create a culture of ethical behavior:

1. State the values that matter and why – for your firm, your clients and every employee. Stated values have a perceived value in the workplace when posted, referred to and taught. They give meaning to the daily work routine. A common commitment to the client, providing the best products in the market place, and unparalleled service carry more value than stockpiling profits, which employees do not always share.

2. Publicize the firm’s commitment to ethical values. Customers, clients and prospective business are all impacted positively when values are publically stated. It is especially powerful when the values are demonstrated. Target, Sam’s Club and Wal-Mart are just a few retailers who put the dollar amount of their charitable contributions on display.

3. Top-down leadership must commit to ethical values. Research indicates that employees do not believe top management lives up to the values and ethics they say they believe. Leaders must demand the best from themselves and reward employees who report misconduct and violations of the stated policy.

4. Managers at every level must pledge to learn, teach and apply the values stated. When employees see their own management team living corporate or organizational values and expecting all others to do the same, it is a confirmation that values matter.

5. Remind the entire organization that the right thing to do is always to do the right thing. Pressure to create sales and meet rollout deadlines, or reach the goal and please the stockholders or owners should never result in compromised behavior. Values and ethics are the glue that holds everything together. When they are broken, the sound carries far and wide and can trigger an avalanche of ethical lapses that can never be undone.

6. Mottos and mission statements make a difference when they are displayed throughout the workplace. A mission, a motto and stated values can be printed on wallet cards, posters or wall plaques in offices and gathering places. Values matter, and seeing them implies that they are just as important as labor laws and evacuation guides, and – perhaps – more meaningful for employees.



7. Be quick to take action when ethics and values are violated. If you want to denigrate a previous effort and integrity, ignore a violation when it occurs. Permitting violators to continue in their position when the facts of poor behavior are clear ends all creditability with your employees. The word will circulate quickly and undermine any previous efforts to maintain ethical standards. If it is believed that some can get by with anything while others are punished, that sends a powerful message that ethics do not exist.

8. Ethical training and discussions help put values to work. When management expresses the values that the company or organization is to live by, employees are challenged to follow the example the company sets. This is one time when top-down leadership clearly works. Describing the right actions resulting from your shared values builds trust.

Consider this: your values actually create value for your company. Year after year some of the world's most admired companies, the best places to work and highest growth companies are those with clear corporate values demonstrated in the work place.

Top ethical companies are in every industry: oil and gas exploration, health care and restaurants, Internet companies and financial service. There are a variety of rankings from Forbes, Ethisphere and others.

Ethisphere plainly states, "These companies also understand that a strong culture of ethics is also key to helping drive financial performance."

Employees want to come to work every day more excited than the last – no one wants to dread going to work. Even tedious and repetitive tasks have a purpose larger than the action itself. A unified understanding of the key values applied to decision-making makes a difference. A deep commitment and belief in the mission of the company to delight customers, develop dedicated clients, solve problems and positively impact others is a value to be created, understood and shared. When the ethical line is blurred and values are questioned, employees stop believing in the company and taking pride in their job and its significance.

Your business or organizational culture is a conscious state of mind. It makes all the difference in the pride and accountability in each employee and how clients, customers or potential clients are treated in your organization. Culture is built on values, ethical expectations and behavior. Make your ethics and values real and watch the positive changes that flow from these clear and expressive centerpieces of your culture.

John Hammond said, "Character is the real foundation of all worthwhile success." That applies to corporations and organizations as well as individuals. Declining ethics and values need not be a prophecy

fulfilled. Build your corporate character, explain and live your values and it is likely success will follow in more ways than you can imagine. **C**

ABOUT THE AUTHOR

Stan Craig, the founder of the ForeTalk Seminar, is an accomplished financial planner, executive coach and keynote speaker. For more information, visit www.ForeTalkSeminar.com.

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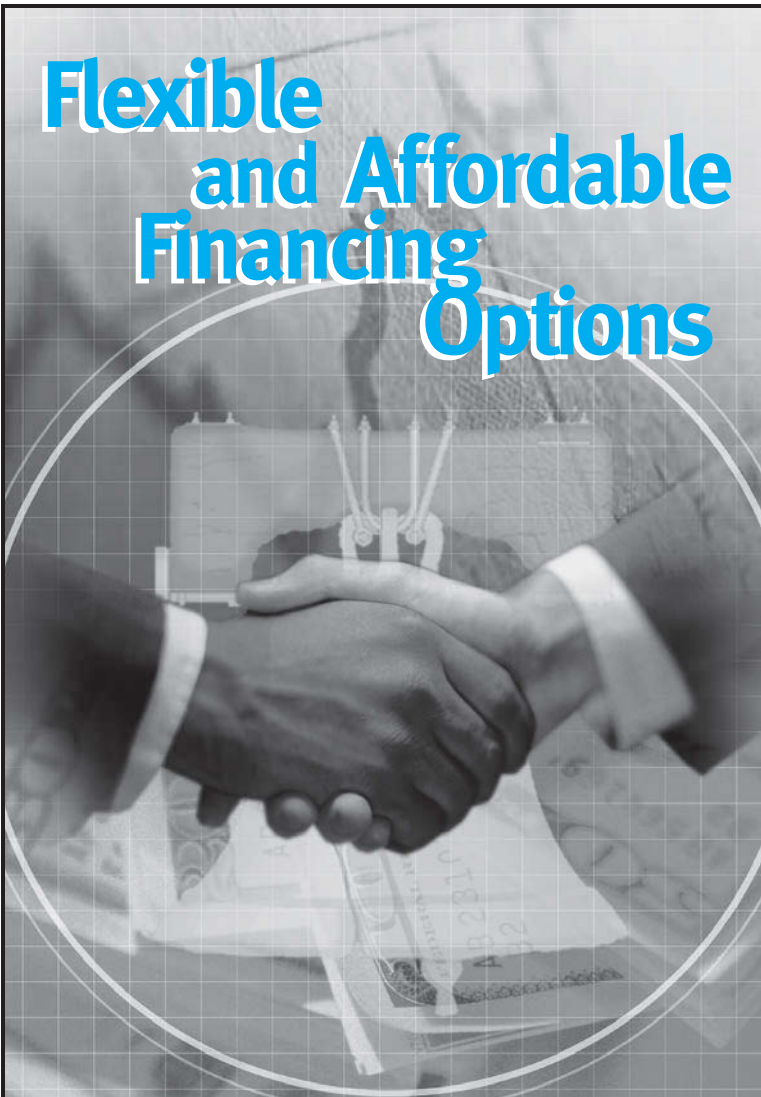
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New or Used?

There are important questions to answer before deciding which way to go on that next big equipment purchase

By Erik Gunn

In two previous columns, we've looked at how you might finance an expensive new piece of equipment as well as what impact a major purchase could have when the time comes to sell your business.

This time we'll address one other issue: Is it better to buy new or used?

That decision has implications both for financing and for the future sale of your company. But it also demands consideration simply on its own terms. In making that decision, you'll need to ask which will be the better value? And there's no one-size-fits-all answer.

Sometimes used is good enough. Sometimes it's even better. And sometimes, it's exactly the wrong decision.

LITTLE QUESTIONS INSIDE THE BIG QUESTION

Like many questions, the question of "Which is better, new or used?" actually has many other, much more specific questions lurking inside it. So our job today is to unmask those other little questions. Answer them, and you'll answer the big one.

Does the product change a lot? How soon does any particular model become obsolete?

If the answer to that first question is "Yes," the second will probably be "pretty darn soon." In that case, go for the new model: The used one is probably already out of date.

Consider how relatively inexpensive a brand new personal computer is today compared with the cost 10 years ago, and yet how much more powerful it is. Buying used would probably not be worth the money unless your actual computing needs were tiny and you know they would never change.

But lots of things don't change that fast, and when they do get added bells and whistles, those may be far from essential. So if the answer is "No," then buying used could be a good choice, depending on other factors.

Going through a dealer with an established, positive reputation is likely to be the safer route for buying a used piece of equipment, rather than relying on, say, a stranger on Craigslist.

Is it for a core service your business provides? Or is it for something you're just beginning to expand into?

The closer to your core business the item is, the more you're probably going to want to buy new. On the other hand, if you're getting this machine to branch into a new line of service, you might want to look for a cheaper used product, lowering your cost of entry into the new line and also cutting the "sunk cost" you've incurred should you decide that the new business isn't as profitable as you expected it would be.

What is the item's resale market?

That's actually a tricky question, and by itself, the answer won't actually tell you a whole lot. Here's why: If the resale market is good, you can read that as an argument for buying either new – you'll be able to sell it yourself without much difficulty if you need to for any reason – or used – you'll have an easier time of finding a used item than if the resale market isn't so great. But it's still worth knowing by itself, because taken with all of these other questions, it can help you make the most informed decision possible.

Are older models actually better?

That happens sometimes. Think houses – what experienced homeowner do you know who doesn't swear older homes are better built – sturdier, more solid and with better craftsmanship? The key, of course, is that the designs might not fit your needs, or the home lacks newer features like better electrical and plumbing systems or dedicated media rooms or easily finished basements. But if the older models are better and are sufficient to your particular circumstances, that can be a good reason to purchase used.



What's the product's maintenance track record and its ongoing maintenance cost?

The better the record and the lower the cost, the safer you are buying used. The worse the record and the higher the continuing cost, the more you may wish to go with new, particularly if that way offers a better warranty. So researching reliability data is critical.

Can you trust the seller if it's used?

Going through a dealer with an established, positive reputation is likely to be the safer route for buying a used piece of equipment, rather than relying on, say, a stranger on Craigslist. If you do buy directly from an individual, make sure you really know what you're getting. Pay a mechanic to look it over before you sign the transaction agreement.

Can you inspect the unit in person?

If you can't, then walk away. You'll be making a big investment, regardless of whether you're buying new or used. To do that without being able to quite literally kick the tires – and do a whole lot more – is absurd.

Is the used product stock, or has it been modified?

The more modifications the previous owner has made to the machine before selling it to you, the greater the risk. Even if the seller is someone you consider completely trustworthy, you can't know what sort of aftermarket and seat-of-the-pants modifications might have rendered the machine less safe to use or more prone to a future breakdown – not to mention, possibly voiding any remaining warranty on the product.

FINANCING AND RESELLING

Finally, consider what the new or used choice might mean for financing.

Your options are probably fewer for financing used equipment – you'll probably have to go through a bank, especially if you buy from a private party. And older equipment might require a faster payoff on the loan and larger payments. Equipment you own has one other purpose you might not think of: It's a way to borrow money in the future if you suddenly face a cash crunch.

Don't over-leverage yourself now, when you first buy it. And think twice about buying used, if that means your actual equity against which you can borrow will be much less than if you bought new.

These aren't the easiest questions to answer, and some take a lot of research. But they're worth the time and energy, so that when you get that next big truck, you'll know you made the right decision – new or used. **c**

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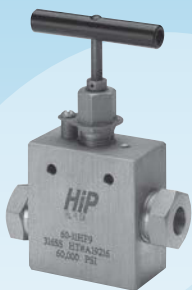
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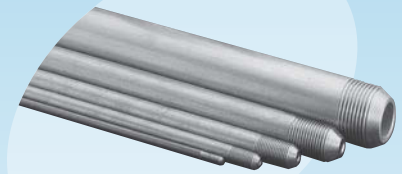
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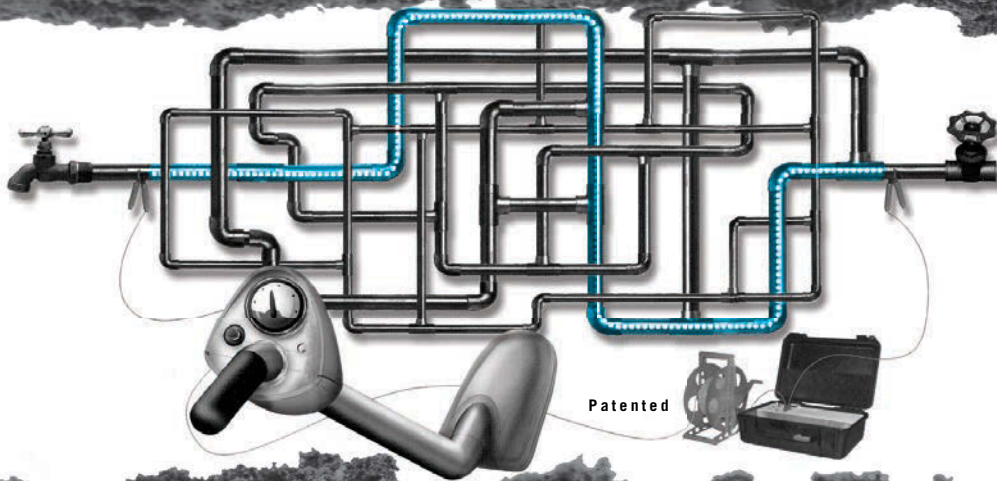


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A pull-in-place structural lining method solves grease line issues in a Las Vegas hotel and casino

By **Scottie Dayton**

A contractor cleaned clogs from a 290-foot-long gravity grease line at Circus Circus Hotel and Casino in Las Vegas, Nev., for a year. As service calls increased in frequency, director of facilities Ron Brown realized he had a serious problem.

The 45-year-old pipe ran 4 feet beneath a concrete service hallway on the first floor. Excavating to replace it would be expensive and interfere with daily operations. A recommendation sent Brown to Nu Flow.

“We inspected the line, but couldn’t see much because the pipe was full of water, grease and debris,” says Nu Flow regional project manager Nick Ghosn. “Our biggest challenge was the unknown in this dark, dirty, forgotten part of the casino.”

“The line had a Heat Trace cable to warm the pipe and keep grease flowing. Heating the pipe caused it to crack.”

Nick Ghosn

To rehabilitate the line, Ghosn chose the Nu Drain start-and-stop pull-in-place structural lining method, which eliminated reinstatements and was more economical. The eight-day project dealt his crew a few surprises.

DISCOVERY PERIOD

“We were told to expect a straight run of ABS pipe,” says Ghosn. “Our two-day inspection proved otherwise.”

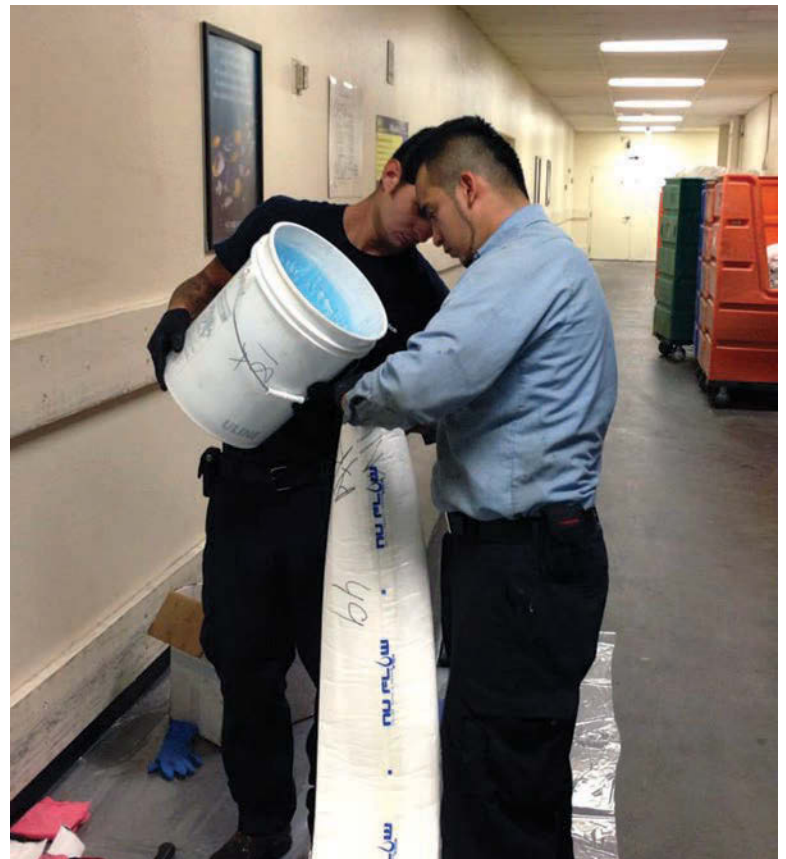
The SeeSnake camera/locating system (RIDGID) revealed 20 feet of 4-inch cast-iron line running from the street clean-out to a 90-degree elbow. From the bend, 4-inch ABS pipe ran 130 feet before upsizing to 6-inch ABS, which ran 140 feet to the upstream clean-out. Both lengths of pipe had two pairs of 45-degree elbows that dropped elevation 10 feet.

The number of turns in the pipe and its condition made additional access points necessary. Per Ghosn’s specifications, Brown hired a contractor to install two downstream clean-outs and excavate a 4-foot-square hole midway in the line where it upsized. Everyone worked in the hallway during the day, yet most staffers were unaware of the activity.



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Nu Flow lead technician Max Page, left, and third support technician Ruben Raudales pour epoxy into the Nu Drain liner. (Photos courtesy of Nu Flow Technologies Inc.)

Ghosn's crew also found a communal line serving three second-floor kitchens at the upstream end of the grease pipe. He engineered a bypass system, then the casino maintenance staff installed it. At the first-floor level, a 4-inch line from the main buffet dishwashing room and a 3-inch line from the employee dining room teed into the upstream end.

GETTING A CLEAR PICTURE

On the third day, the team parked their truck and a 300-gallon trailer-mounted jetter (US Jetting) at the curb by the street clean-out. They spent the morning using a pneumatic heavy-duty Micro-Cutter cable machine (Nu Flow) and various cutting tools to break up the grease in the downstream segment. That afternoon, they jetted the debris, collecting it in a 16-gallon wet/dry vacuum (RIDGID).

Technicians repeated the process the next day, cleaning upstream from the access pit. "The door at the end of the hallway was 15 feet from the curb and our jetter," says Ghosn. "We dragged in the hoses and went to work. The only reason we ever entered the kitchen was to grab a bite to eat."

As the pipe's interior walls emerged, the camera detected a crack running along 80 percent of the crown. Although technicians saw evidence of exfiltration, erosion was not an issue. "The line had a Heat Trace cable to warm the pipe and keep grease flowing," says Ghosn. "Heating the pipe caused it to

crack." During two and a half days of cleaning, workers removed food, kitchen utensils, plate fragments, 10 pounds of broken glassware and a dozen pieces of flatware from the pipe.

NIGHT BY NIGHT

Liners were installed over four nights from 11 p.m. to 7 a.m. Before going home, kitchen staff parked mobile food cabinets along one side of the

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A roller (left) forces epoxy into the liner.

corridor to create an unobstructed wetting-out area. Ghosn's technicians protected it by laying plastic sheeting on the floor and taping it to the wall. Each night, they gave the grease line a quick cleaning to flush out the day's debris.

Liners were cut 40 to 50 feet long, the distance between tie-ins or clean-outs. After technicians impregnated the felt with epoxy and inserted the calibration bladder, they attached a pulling cap with D-ring and secured a 1/8-inch cable to it. They mounted a cap with an air connection to the other end of the liner and rolled it up. Meanwhile, another technician tied light polyester string to a little garbage bag and floated it downstream to the insertion point.

"We tie the string to the cable, pull it upstream and off we go," says Ghosn. "One man unrolls and feeds in the liner while another downstream pulls it through. It isn't difficult if the pipe is clean." Only one longer run required a winch.

The liners stopped at one end of a tie-in or clean-out and started at the other end, leaving a 2.5-inch gap. Once a liner was in place, an air compressor inflated 4-inch liners to 10 to 12 psi and 6-inch liners to 12 to 15 psi. As the bladder expanded, it squeezed out enough epoxy to coat the exposed fitting. The epoxy ambient cured in four hours, enabling workers to pull in two or three liners per night.

On the eighth night, technicians pulled in the last liner, flushed the new pipe with water and inspected it. "I told the maintenance staff to disassemble the bypass, and we were done," says Ghosn. The grease line has had no more backups. **C**







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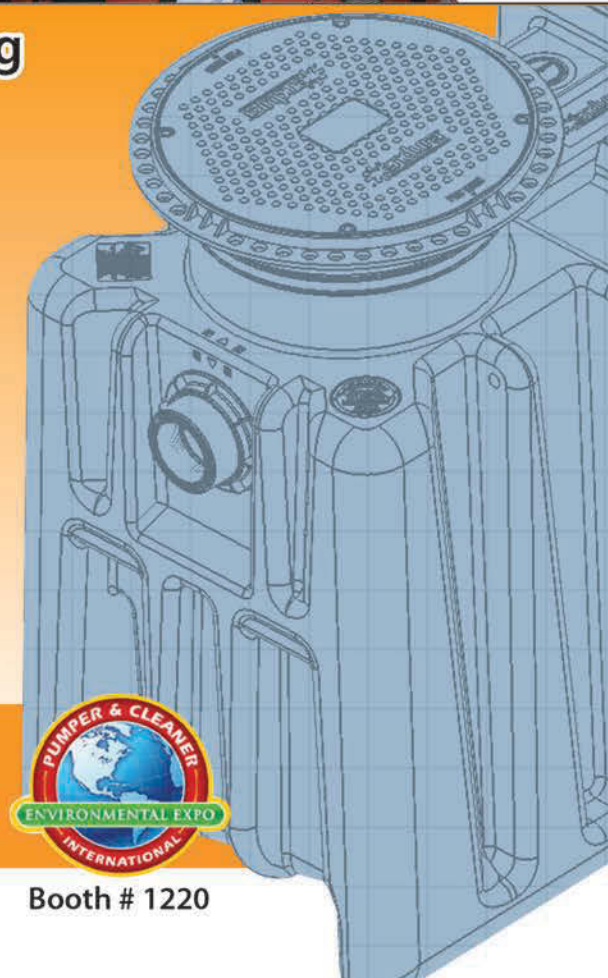
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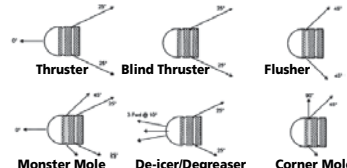
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Clear Vision

Pipeline camera boosts productivity and gives customers a different view of sewer lines

By Ken Wysocky

There's often more than a grain of truth behind clichés, and two of them in particular sum up why plumber Derek Olin is such a big fan of the EasyCAM pipeline inspection camera: Seeing is believing, and time is money.

To understand the former, it helps to know that before Olin bought an EasyCAM, the owner of Olin Plumbing Inc. in Tampa, Fla., frequently had a hard time convincing skeptical customers that an expensive lateral-line repair was necessary to solve their drain-blockage problems. The prospect of a \$4,000 or \$5,000 repair job will do that to Joe and Jane Homeowner.

But that obstacle disappeared once customers could look over Olin's shoulder and actually see a broken lateral line on the EasyCAM's 8-inch color monitor.



The EasyCam requires very little setup or teardown time, and in some cases it has helped Olin Plumbing Owner Derek Olin convince skeptical customers that lateral line repair is necessary to solve their drain-blockage problems. (Photo courtesy of EasyCAM LLC)

“Before I bought the camera two years ago, I pretty much left everything to my 43 years of experience in the field,” says Olin, who established his own company in 2010 and serves the metropolitan Tampa area. “Now don’t get me wrong – experience definitely does help you diagnose a problem. There’s lots of time when I pretty much know what the issue is before I put in the camera.

“But in terms of selling jobs, it’s so much better if you can take the homeowner by the hand and show them the problem,” he continues. “It makes life so much easier. Seeing really is believing.”

Then there’s the time-is-money factor. Most cameras that Olin has worked with over the years require setup and teardown time. But the portable, compact and lightweight EasyCAM, made by EasyCAM LLC, takes that issue off the table.

“Instead of spending 20 or 30 minutes unpacking a camera system and assembling components, I just take it off my truck, roll it over to the hole and start working,” he explains. “There’s nothing to set up unless I want to record the inspection, in which case I have to hook it up to my laptop computer, which takes only a few seconds.”

In fact, the EasyCAM is so easy to use that Olin says he often doesn’t charge customers extra to inspect a line.

“If people want just a camera job, I charge them for it,” he explains. “But if I’m pretty sure there’s something wrong with the sewer line, I tell them I’ll take a look for no charge. Then the customer feels a little more confident in you because they see you’re concerned about their property. And like I said before, when they can actually see a problem, they usually want to get it fixed.”

The EasyCAM features eight modular components for ease of use and simple repairs. All replaceable components either plug in or screw in, or both. For example, even the camera lens can be replaced in the field with just four Allen wrench screws if it gets scratched or breaks, and the pushrod simply plugs into the frame and the camera head.

The unit features a waterproof, titanium color camera head with a scratch-resistant sapphire lens; a 150-foot, heavy-duty, low-friction pushrod (an

money machines

OWNER: Olin Plumbing Inc., Tampa, Fla.

EQUIPMENT: EasyCAM pipeline inspection camera from EasyCam LLC

FUNCTION: Inspecting lateral sewer lines

FEATURES: Waterproof, titanium color camera head with scratch-resistant sapphire lens; 150-foot, heavy-duty, low-friction pushrod; 8-inch color monitor; rugged but lightweight wheeled, aluminum frame.

COST: About \$6,000

optional 200-footer also is available); a color monitor; and a rugged but lightweight wheeled, aluminum frame. The unit works with any off-the-shelf video equipment that operates with a standard video input jack (the new E5200 camera offers onboard recording and 180-degree picture inversion).

The EasyCAM works with off-the-shelf video goggles, which Olin uses. The goggles feature a small TV screen inside one lens that eliminates the need to constantly look up or over at the unit's monitor. "It allows me to focus on what I'm doing, rather than trying to feed the cable and turn to watch the monitor screen at the same time," he says.

"Instead of spending 20 or 30 minutes unpacking a camera system and assembling components, I just take it off my truck, roll it over to the hole and start working."

Derek Olin

Olin also lauds the unit's portability, noting that even at age 57, he can easily carry it up a ladder and onto a roof if he needs to do an inspection via a sewer stack pipe. "I can carry it with one hand and just drop it down the stack," he says.

The unit's ability to record inspections to various media also provides benefits. In one case, Olin says, he recorded an inspection and uploaded the video – taken for a property-management client who was experiencing sewer backups at a store inside a shopping mall – to YouTube, where the out-of-state client could easily view it. "It was slicker than owl snot," he says.

Overall, the EasyCAM has been an invaluable tool in growing Olin's business. Lopping off about 30 minutes per job through faster, more efficient setup provides more time to take on other jobs, which in the long run boosts profits and cash flow. In addition, Olin says he now obtains business he otherwise wouldn't have, because more and more commercial customers won't hire a plumbing contractor unless they can camera a line.

"It's definitely helped me grow the company," he says. "I can't emphasize enough how easy it is to use ... it's so much less labor intensive. I'd say it paid for itself after just one month." **c**

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PRODUCT SPOTLIGHT

Stationary hot-water pressure washers available in natural gas, LP models

By Ed Wodalski

SNG (natural gas) and SLP (liquid petroleum) stationary hot-water pressure washers from Shark Pressure Washers & Jetters feature flow rates from 3.5 to 9.8 gpm and pressures from 2,200 to 3,200 psi. Designed for cleaning contaminants and grime from large equipment, the washers include no-weld, riveted-steel cabinets, industrial-grade Baldor motors, removable cabinet panels, optional auto start/stop control at the gun, a durable heating coil made of cold-rolled Schedule 80 steel pipe, dual belt-drive triple high-pressure pump and high-efficiency burner with electronic ignition.

“One of the advantages of the SNG [and SLP] is it has [four] panels that you’re able to remove all the way around the machine,” says Eric Loucks, national sales manager for Shark. “For serviceability, you’re able to access any point of the machine. The panel is very easy to remove. There’s a quick latch and then it slides back and you pull it out. The other thing that’s unique is we have two styles. We have a small footprint [49 by 24 by 48 inches] that goes up to 5 gpm and a larger footprint [65 by 35 by 61 inches] that goes up to 9.8 gpm.”

The washers deliver from 310,000 to 775,000 Btu and weigh from 815 to 1,910 pounds. They also have a wired control box or wireless remote option that enables the user to control the pump, burner and detergent from up to 300 feet away. The belt-driven pump has a Tru-Tite spring-loaded, self-tensioning belt for optimum performance.

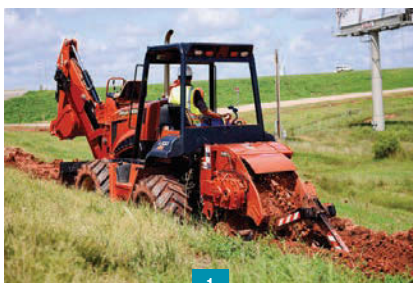
The clean-burning pressure washers are designed for indoor cleaning,



especially for washing down equipment, Loucks says. “And that can be in municipalities, steel mills, oilfields and building maintenance contractors that have fleet equipment.”

Feedback lights (power, ignition, motor overload) on the unit enable the user to quickly troubleshoot problems. There’s also an adjustable thermostat and steam option. The SNG/SLP series consists of eight models, ranging from 2,000 to 3,200 psi, with a variety of voltage options from 208 to 575. The pressure washers come with insulated, 36-inch stainless steel wand and 50 feet of single-wire, high-pressure Tuff Skin hose and fatigue-free trigger gun (rated at 4,500 psi). A two-gun cleaning option speeds equipment cleaning. Fielder’s Choice inlet/outlet connections on either side of the base of the units provide flexible installation.

Other features include electronic ignition, U-Seal pump technology for longer life, overload protected control switches, hour meter, slide-out motor platform and swing-out burner ring for easy inspection and repair, time-delay shutdown and overhead booms. The units are ETL certified to UL-1776 safety standards, CETA certified for performance and manufactured in ISO-9001 certified plants. **800/771-1881; www.sharkpw.com.**



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1 DITCH WITCH RIDE-ON TRACTOR

The four-wheel-drive RT100 ride-on tractor from Ditch Witch has a Tier 4-compliant 100 hp Deutz diesel engine. The operator’s station has a 90-degree swivel seat, adjustable armrests, tilt steering column and color LCD engine display. Options include climate control. **800/654-6481; www.ditchwitch.com.**

2 REED MANUFACTURING DEBURRING TOOL

The DEB1 deburr and chamfer tool from Reed Manufacturing Co. is designed for PVC, CPVC, ABS, PE and PP pipe up to 2 inches in diameter. Features include a slip-resistant knurled grip and blade that can be sharpened or replaced. **800/666-3691; www.reedmfgo.com.**

3 WATER CANNON JETTER PACKAGE

The XT jetter package from Water Cannon delivers up to 5.5 gpm and pressure to 4,200 psi. It functions as a drain cleaner and high-power pressure washer. Powered by a Honda GX 630 engine, it is available with an Annovi Reverberi or General Pump. Features include pulsation on demand, adjustable throttle control from 100 psi and up, and ball valve shut-off. The 15-gallon fuel tank, electric key start and portable wheel kit are included. Accessories include Hosetract hose reel to handle 300 feet of 3/8-inch Piranha jetter hose, 125 feet of 1/4-inch hose and four stainless steel nozzles. **800/333-9274; www.watercannon.com.**

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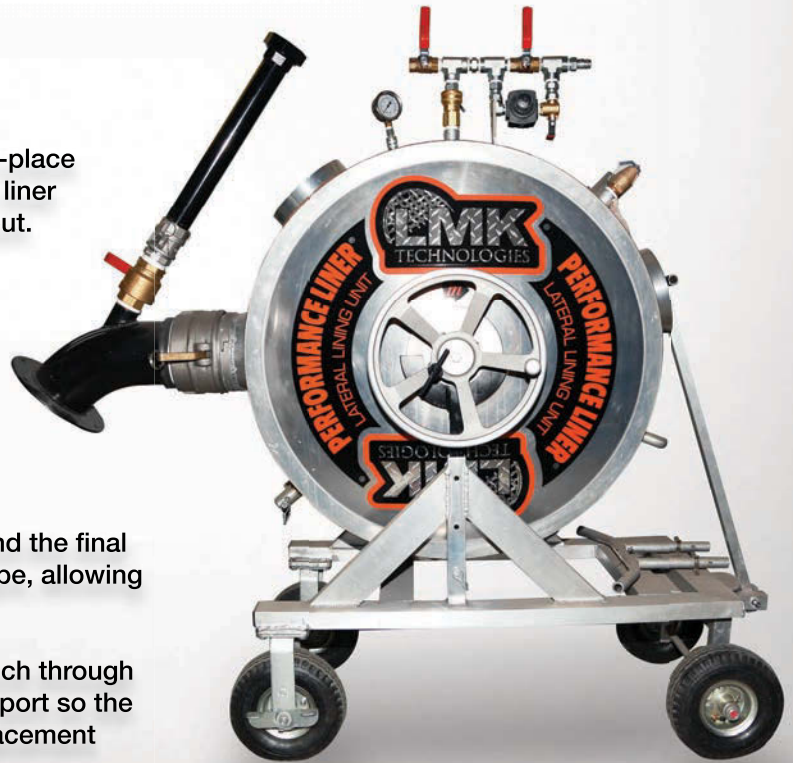
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4 GENERAL GEN-EYE HOT SPOT LOCATOR

The Gen-Eye Hot Spot pipe locator from General Pipe Cleaners features field antenna and on-screen icons to quickly locate inspection cameras, sondes, active power lines and utility lines. The auto backlit LCD display uses arrows to point the way. The null icon indicates pipe location and the camera icon confirms the locator is over the target. Other features include line direction compass, dust and dirt proof and water resistant construction, upgradable software and the ability to locate two sonde frequencies, two power frequencies and four line frequencies. **800/245-6200; www.drainbrain.com.**

5 METABO 5.2 AH BATTERY SYSTEM

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7 TRELLEBORG FLEXIBLE PIPE PLUGS

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8 HONDA CAMO PORTABLE GENERATOR

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9 NLB REDUCED-STRESS WATERJET LANCES

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10 COXREELS HOSE STRAIN RELIEF KIT

The Hose Strain Relief Kit from Coxreels protects hose fittings and connections from potential damage by providing strain relief when the hose is fully extended on the reel. Under use, the clamp takes on the force from the over-extended hose and protects the hose fittings and connections at the riser from extensive tension. The accessory is available for hand-crank and motorized reels with hose sizes between 1/2 and 1 1/2 inches I.D. **800/269-7335; www.coxreels.com.**

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11 CONDUX PIPE SPLITTING TOOL

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12 REELCRAFT HEAVY-DUTY, HAND-CRANK REELS

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13 ERGODYNE HEAD PROTECTION

The Skullerz head protection line as well as the Skullerz 8950 bump cap and 8960 bump cap with LED lighting from Ergodyne are designed for applications with overhead hazards but do not require a hard hat, protecting workers from bumps, bruises and cuts. The caps have a flanged shell that expands or contracts to fit the worker's head for a secure fit. Thermo-formed foam and a ventilated shell provide optimized breathability. The shell also can be removed for cleaning. **800/225-8238; www.ergodyne.com.**

14 STANLEY VIDMAR 5S CABINETS

5S cabinets from Stanley Vidmar are designed to fulfill lean and Kaizen storage requirements. Features include Plexiglas or solid hinged doors with metal pegboard inserts, heavy-duty lock and difficult-to-duplicate key system to safely secure valuable items. **800/523-9462; www.stanleyvidmar.com.**

15 VACALL SEWER CLEANER HIGH-DUMP OPTION

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16 TT TECHNOLOGIES SYNTHETIC AIR TOOL LUBRICANT

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17 PRESSUREPRO TPMS TIRE PERFORMANCE MONITORING

Commercial tire pressure monitoring systems (TPMS) from Advantage PressurePro, in collaboration with Omnitrac's mobile computing platforms 110 and 200 (MCP110 and MCP200), provide tire performance information to an in-cab display, enabling fleets to extend tire life, reduce expenses and prevent accidents caused by improper tire care. The system provides drivers and office staff with graphical data on tire conditions, including real-time pressure and temperature settings, under- and over-inflation alarms and high-temperature alerts. **816/887-3505; www.pressurepro.us.**

18 AQUATHERM 4-INCH SDR PIPE

The 4-inch Blue Pipe standard dimension ratio (SDR) 17.6 pipe from Aquatherm is designed for water main applications and similar installations. Blue Pipe SDR 17.6 also is available in 6- to 24-inch diameter. **801/805-6657; www.aquatherm.com.**

19 MCELROY PIPE FUSION SOFTWARE

DataLogger Vault pipe fusion software from McElroy Manufacturing provides joint-data analysis and storage. Compatible on the DataLogger 3, 4 and 5, the free online app enables users to view and analyze data from most devices. The DataLogger 5 records and documents key parameters of the pipe fusion process. Features include GPS stamping, barcode scanning, photographic capabilities and full support for Wi-Fi and cellular networks. **918/836-8611; www.mcelroy.com/fusion. c**

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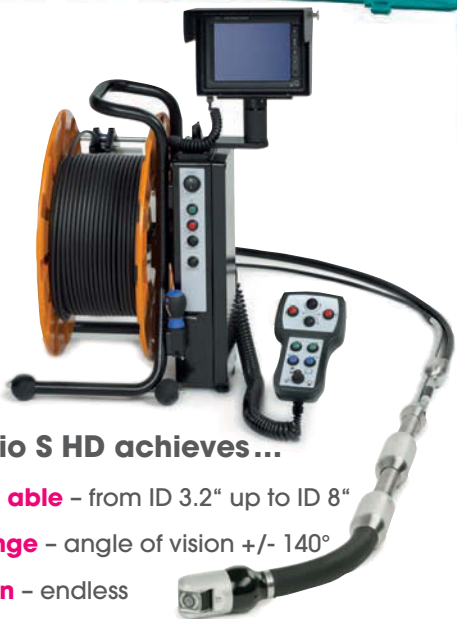


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Peerless adds circuit breaker line

Peerless Electronics added Sensata's First Technology automotive circuit breakers to its line of products. The EXT 300 Series is designed as a drop-in replacement for mini type fuses.

ePIPE receives SABS approval

ePIPE FRS two-hour cure lining material from Pipe Restoration Technologies received approval from the South African Bureau of Standards (SABS) as fully complying with the South African Standards for Drinking Water (SANS).

SPIR STAR expands SAMI product line

SPIR STAR expanded its line of SAMI Instruments. Product offerings include tube compression fittings, 6,000 psi and 10,000 psi needle and ball valves, instrumentation valves, DPT manifolds, monoflanges and double block and bleed (DBB) valves.

HOBAS Pipe certified for Canada drinking water

HOBAS Pipe USA gained inclusion on the Bureau de normalization de Quebec's (BNQ) list of certified products, processes and services. BNQ is a member organization of the National Standards System of Canada and acts as a partner to business, industry and public and regulatory bodies for the purpose of improving the quality of products, processes and services, as well as their acceptance in all markets.

HIP opens expanded manufacturing plant

High Pressure Equipment Co. (HIP) opened a 43,000-square-foot manufacturing plant in Erie, Pa. HIP manufactures and markets products to the waterjet cutting and oil and gas industries.

WJTA-IMCA name officers, board

Bill Gaff, vice president of sales and marketing for Vacuum Truck Rentals and Vacuum Truck Sales, was elected 2013-2015 chairman of the board for the Waterjet Technology Association (WJTA) – Industrial & Municipal Cleaning Association (IMCA). Also elected for the 2013-2015 term were George A. Savanick, president; Bill McClister, vice president; Kathy Krupp, secretary; and Larry Loper, treasurer. New board members include Fred D. Clark, Kay Doheny, Mohamed Hashish and Gary Noto. They join current members Luis Garcia, Kerry Siggins and Forrest Shook.

Guardair receives Pro Tool Innovation Award

Guardair Corp.'s Lazer Palm Switch safety air gun kit received the 2013 Pro Tool Innovation Award from Pro Tool Reviews magazine as the most innovative air compressor accessory in the pneumatic tools category.

RIDGID launches enhanced website

RIDGID launched www.ridgid.com, a single, global company website with responsive design that enables it to work on any Internet-enabled device. The website dynamically scales larger and smaller, depending on the device and its orientation, and enables users to review, rate and ask questions about specific products.

TT Technologies expands pipe ramming gear inventory

TT Technologies expanded its in-stock inventory of pneumatic pipe ramming gear to accommodate 4-inch through 120-inch casing installations.

Electric Eel celebrates 75 years

Electric Eel Mfg. celebrates its 75th anniversary in 2014. The manufacturer of professional quality drain and sewer cleaning equipment has been based in Springfield, Ohio, since 1939.

Exair's Chip Vac receives CE mark

Exair's Chip Vac received the CE mark for meeting the safety, health and environmental standards of the European Union. The vacuum system picks up chips and other debris and delivers it to a 5-, 30-, 55- or 110-gallon drum.

Wastequip names division presidents, vice president

Wastequip promoted John Defenbaugh to mobile division president. He will be responsible for sales and operation of the Galbreath, Pioneer, Mountain Tarp and Parts Place brands. Shawn King was named president of Wastequip's technical division and will focus on growing market share for compactors and balers. Tim Phanco was named vice president of sales for Toter.

Joe Johnson Equipment opens Texas location

Joe Johnson Equipment opened a location in Beaumont, Texas, to serve the Gulf Coast Region from Corpus Christi, Texas, to New Orleans, La. JJE supplies equipment to the industrial cleaning market, including hydroexcavators, industrial vacs, horizontal directional drilling and trenching products. c

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PIPELINE REHABILITATION



2005 Ford F650 ISB Cummins engine, 5-speed manual, 71,000 kms. Has a rush steamer unit mounted on chassis. 4.2 million BTU 3-p oil-fired burner \$165,000

613-227-8671, Ontario C04

New Sewer-Lining Trailer: Includes 2007 16 x 8.5' trailer, inverter, 4" & 6" inversion heads, 15' of discharge tube, 330' liner & bladder, 1/2" drill & mixing blade, 2-6" caps, 100# roller, & custom shelving. Never been used. Call or text Brad at 231-218-6066 for questions & pictures. \$27,500 or considering offers. (C04)

Equipment & Materials for the Cured-In-Pipe Industry – Equipment Rentals – Shooters/Inverters - Prepared Resin Saturated CIPP Liners. www.cipp-services.com www.fastpipelining.com (C05)

2012 Perma-Liner Inner Seal System. Complete inner seal system in a 2006 16' enclosed trailer, w/1200' of steam hose, electric winches, control center with monitor, power cables, coax cable, 8" skeleton and bladder, positioner, and other miscellaneous parts. \$99,650. Call 208-941-9424 for more information and pictures. (C05)

One trade-in model of Pipe Genie heavy-duty, pipe bursting equipment. Excellent condition, looks new, 30-ton, 100 feet cable, full 2-year warranty. 877-411-7473. (CBM)

POSITIONS AVAILABLE

GapVax, Inc., a nationally recognized manufacturing business, is seeking a talented, highly motivated individual to fill a full-time Sales Position in the Midwest (Iowa based preferred) region. GapVax is the leading manufacturer of industrial and municipal vacuum units and hydroexcavation units in the United States. We provide the most reliable, comprehensive, and efficient mobile vacuum units in the industrial and municipal markets. Specifications of the position are listed on our website, www.gapvax.com, click on the Now Hiring link in the left hand column. Send resumes to Lthomas@gapvax.com or 575 Central Avenue, Johnstown, PA 15902. (CPMGBM)

USG is a growing Pennsylvania-based company seeking CCTV, grouting, jet/vac, CIPP, HDD, lateral rehab and manhole rehabilitation technicians and foremen. Applicants should have a minimum of 1 year experience in the industry. We are an EOE offering great pay, relocation subsidy and steady work. Send resumes to HR@usginc.net, Fax: 717-737-6093 or USG HR Department; 1304 Slate Hill Road, Camp Hill, PA 17011 (C04)

Employment Opportunities: Florida-based utility contractor is expanding. Seeking experienced TV/grout operators, CIPP lining technicians for a new crew, all positions. Clean CDL B w/tanker, 3 years CIPP experience required w/references. EEO/AA, drug and alcohol free workplace, USDOT regulated company. Call 727-528-1998 for further details. E-mail resumes to jtvincorporated@aol.com (C03)

SALES POSITION: Manufacturer of high-end sewer nozzles seeks representative for East Coast Region - Virginia to Maine. Easy to sell with good demo. MUST love to travel. Salary plus commission, vehicle, etc. Send resume to resume@nozzteq.com or call 866-620-5915. (CBM)

Underground Palmetto FL Utility Company seeking experienced technicians and crew leaders with knowledge of trenchless methods. Fax resume to 941-722-3447 or email to info@subterraintl.com (C03)

PUMPS

Two (2) 4" Thompson Double Diaphragm Pumps: 5hp electric motor, single phase. Cost new - \$9,000 each. Will sell both for \$5,000 or sell individually for \$3,000 each. Pictures are available upon request. Please call 910-738-5311. (CBM)

Buy & Sell all makes and models, **new & used** vacuum pumps & high pressure water pumps, and good used replacement parts. Call for an inventory sheet and save. **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp, 2" pump with hoses. The Cable Center: 800-257-7209. (CBM)

New, never used Myers D65-20 water pump. List price: \$17,992. Sell for \$9,750. New Rockford power take-off part number 4-11182 - \$700. 714-381-4141. (CBM)

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jettors. All available for daily, weekly, monthly, and yearly rentals. **VSI Rentals, LLC, (888)VAC-UNIT (822-8648) www.vsiRentalsllc.com.** (CBM)

SERVICE/REPAIR

Dynamic Repairs - Inspection Camera Repairs: 48 hour turn-around time. General Wire, Ratech, RIDGID, Electric Eel Mfg, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. **Rental equipment available.** For more info call Jack at 973-478-0893. Lodi, New Jersey. (CBM)

*****www.servicewithasmile.com*** Sewer Cam Reel and Camera Repair: Authorized for General Wire, Ratech, Vision & Ridgid. Quality service on all brands. Need more info? Just call Terry or Stan. Electronic Repair Co., Birmingham, AL 35206. 205-836-0454; email: repair@servicewithasmile.com. (CBM)**

TOOLS

T&T Tools: Probes, hooks. Probes feature steel shafts with threaded and hardened tips. The insulated **Mighty Probe™** tested to 50,000 volts. **Top Poppers™** open man-hole covers easily. Free catalog. www.TandTtools.com. Phone **800-521-6893**. (CBM)

Ritchie Yellow Jacket Recovery System & BULLET 7 cfm pump. The Cable Center: 800-257-7209. (CBM)

Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

RIDGID model #300 with stand, RIDGID tri-stand vises, RP 330 ProPress kit. The Cable Center: 800-257-7209. (CBM)

TRAILERS- VACUUM/TANKER

4,000-gallon Lely Self-Contained Vac/Press Tanker: Isuzu motor, Fruitland RCF 500 vacuum pump, Evans tri-axle trailer with aluminum wheels. Excellent condition - \$27,500. Pictures are available upon request. Please call 910-738-5311. (CBM)

TV INSPECTION



2010 Ford E450 Diesel Aries 16' high-cube CCTV "DEMO" inspection van. 15,000 miles, TR3000 Badger for 8" to 30" & large line kit, PE 2720 multi-conductor pan and tilt LED camera w/ 1000' of Red Maxx cable. High-cube command center, high-cube equipment room, wash-down system. 7,500-watt diesel generator. Equipment hoist. Ready to go to work. Call or e-mail for questions or further info.\$107,000

jamesl@solidwastesystems.com
James Long 253-709-5082, WA C04

Used and rebuilt camera kits in stock: RIDGID Mini Compact, Mini Color, Standard Self-Leveling, General Gen-Eye I, II and III, Aries Seeker, and SRECO kits. The Cable Center: 800-257-7209. (CBM)

2010 Rausch M-Series Lateral Launch System: CCTV mounted on a 2010 Ford E450 16-foot high cube box. \$155,000. 877-389-2227 (C03)

MAINLINER Buying & Selling Used Equipment. CANADA & USA PEARPOINT MAINLINE EQUIPMENT ONLY. Will buy complete Pearpoint trucks. Will buy your old system. Do you need used parts? 399, 599 Reels; 420, 448 Tractors; 494 Digital and Zoom 420 light heads. Call: 1-800-265-4298 or mainliner2075@hotmail.com (C04)

1995 Chevrolet W-5 tilt cab 20ft. box van diesel camera inspection truck. Truck has less than 50K miles with good rubber. Excellent running condition. Equipped with all Cobra equipment including two cameras (needing repair), and two camera transporters (one track; one large-wheeled). 18 various size transporter wheels. NEW Cobra Datalogger, PCU, SCU, control panel, two Panasonic VCRs, two Sony TV monitors, desk. One camera reel, one air, water & power reel for cutter. Work cabinets w/hand sink, tool box, misc. hand tools. Onan propane generator, AC unit roof. \$30,000. 256-452-5171 weartek.jimk@coosahs.net (C03)

2000 E 350 Diesel Cobra Video Inspection Van: 2000 E 350 Gas CUES TV Inspection van (3 available) CUES Lamp 1 Lateral Launch systems Take out City-owned. Will install in your truck. OZ 2 Cameras, CUES MH Camera (New), Pipe Ranger Crawlers Rental Trucks available for lease. 2011 Freightliner Sprinter Cobra demo truck for sale to customers spec. 1996 CUES TV Seal Step van Diesel /Diesel, Quad hose, City-owned, 11,000 original miles. Call Cobra Technologies 800-443-3761 or 770-435-8991. Ask for Alan Grant (C05)

1998 Envirosight Rovver 125 inspection crawler, extra wheels, aux. lights, riser. Build out in 1990 Chevrolet Van includes office and rear work areas. Air conditioning, tool boxes. V8 engine, 22,000 miles. St. Paul, MN 651-645-5726 (C04)

New, never-been-used Aries TR3300 Pathfinder pan & tilt camera system. 6" steerable self-propelled tractor, 20" down-rigger assembly, Saturn III HV color case unit video/keyboard/control module/DVD/VCR. Matches pipe contour, power forward/reverse, steer-left/right, superior maneuverability. Continuous-duty drive motors, 6" re-lined to 24" sewer lines. 512Hz detachable locating beacon. Rear-viewing camera quick retrieval - up to 200'/min. \$45,000 OBO. 925-784-0330 (CBM)

CUES K2 SYSTEM: Steerable Compact Pipe Ranger (CPR), OZ3 camera, 1000' gold cable, auto cable reel, CPU, CCU, wireless controllers, six different wheel sets, two different wheel spacer sets, tool and manual. Like new (app. 40 hours) at 20% off list. Call 866-936-8476 or emailoffice@envirosight.com. (CBM)

Aries dual mode thermal imaging pan & tilt color 360-degree continuous rotation sewer camera. Infrared mode finds hidden sewer laterals behind pipe liner. Pinpoint hidden lateral connections. \$25,000 OBO. 925-784-0330. (CBM)

1998 CUES Mainline TV System: GMC Savanna 3500, CUES with Pro-Data on-screen titler, Honda generator, Sony combo DVD/VHS, 1,700' of M/C cable, pan & tilt camera with shorty transporter. \$29,500. 608-835-7767, WI. (CBM)

VACUUM EQUIPMENT

Vector 12-yard debris hopper with 8' telescoping boom, domed rear door w/ hydraulic locks, cyclonic separator. All in good condition. \$7,500
Call Kevin 704-289-6488 C03

VACUUM LOADERS

2010 Guzzler OTHER, 2010 Guzzler Classic w/HI-RAIL on a 2006 Sterling Chassis Blower: 716 hours, 95% tire life remaining, 80% brakes remaining. Hi-Rail gear installed in June 2012. 18-yard debris body, full-opening rear door with tank hoist and hydraulic door locks, wet/dry unit. All new blower, transfer case, hydraulics, electrical, and air in 2010. Excellent condition, fleet maintained.\$199,000
334-520-6629, AL C03

2010 Vacall ATR1213, 12-yard debris body, 1,300 U.S. gallon water, Hydroexcavation machine mounted on a 2009 Sterling LT-9513 with a Hibon SIAV 8702 tri-lobe blower - 5,300 cfm. (Stock #2151V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

WANTED

Wanted to Buy: Vactor 2100's and late model Guzzlers. Cash. 800-336-4369. (CBM)

WATERBLASTING

Gardner Denver T-375M: Bare Shaft pump. Gardner Denver T450M Bare Shaft pump NLB 20-200: 12 gpm @ 20,000 psi. Gardner Denver LC-1500: 390 gpm max, 15,000 psi max. NLB 36-200 6 gpm @ 36,000 psi. HT-150S 25 gpm max 10,000 psi max, Shell Side Machine, Wheatley 165: 30 gpm @ 10,000 psi, Wheatley 165: 17 gpm @ 20,000 psi. Wheatley 125 with aluminum bronze fluid end. Boatman Ind. 713-641-6006. View @ www.boatmanind.com. (CBM)

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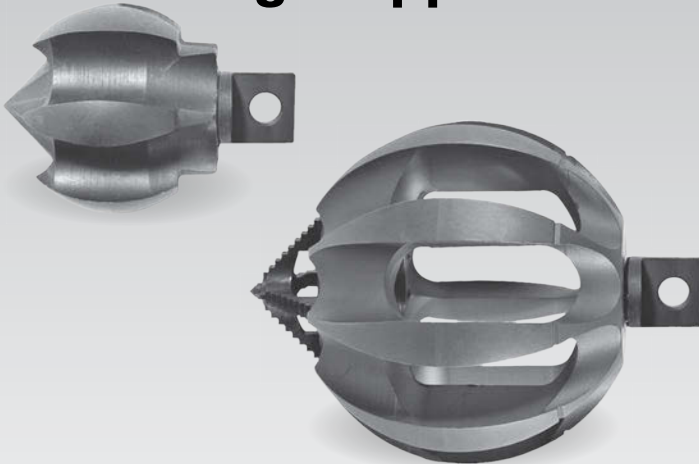
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